

Service Manual

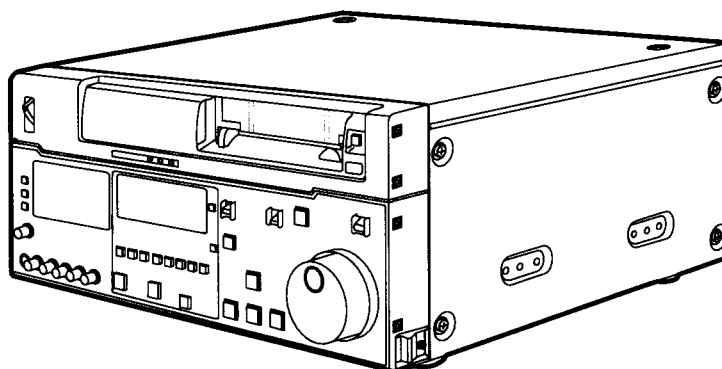
Vol. 1

DVCPRO 50

Digital Video Cassette Player

AJ-D940P/E

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Please refer to the Service Manual Volume 2 (order No. VSD9903M902B) for Service Information, Electrical Adjustments and Block Diagrams.

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INTRODUCTION

This service manual contains technical information which allow service personnel to understand and service the DVCPRO Studio VTR AJ-D940.

Specifications

AJ-D940_P

GENERAL

Power supply voltage	AC 120V, 50 – 60 Hz
Power consumption	215W (full operation)

Operating ambient temperature	41°F to 104°F (5°C to 40°C)
Operating ambient humidity	10% to 90% (no condensation)
Weight	37.84 lb (17.2 kg)
Dimensions	16-3/4" (W) × 6-15/16" (H) × 16-3/8" (D) (424 × 175 × 415 mm) (excluding unit's feet, jacks and jog dial)
Playback format	DVCPRO50/DVCPRO formats
Playback video signals	525i/625i selectable
Playback audio signals	DVCPRO50: 48 kHz, 16 bits, 4 channels DVCPRO: 48 kHz, 16 bits, 2 channels
Playback tracks	Digital/video/audio tracks: Helical tracks Time codes are recorded in sub-code area. Cue track: 1 track Control track: 1 track
Tape speed	67.640 mm/sec (525) 67.708 mm/sec (625)
Playback time	92 min. (using AJ-5P92LP)
Tape used	Metal tape
FF/REW time	Less than 3 min. (using AJ-5P92LP)
Search speed	±32× normal speed (color)
Digital slow	Plus direction: +1× for DVCPRO50 +2× for DVCPRO Minus direction: -1× for DVCPRO50 -2× for DVCPRO
Editing accuracy	±0 frame (using time code)
Tape timer accuracy	±1 frame (using continuous CTL signal)
Servo lock time	Less than 0.5 sec (color framing/standby ON)

VIDEO

Sampling frequencies	DVCPRO50 525i/625i: Y; 13.5 MHz/P _B , P _R ; 6.75 MHz
Quantizing	8 bits
Video compression method	DCT + adaptive quantizing + variable length code
Video compression rate	DVCPRO50: 1/3.3 DVCPRO: 1/5
Error correction	Reed-Solomon product code
Video recording bit rate	DVCPRO50: 50 Mbps DVCPRO: 25 Mbps

Analog Component Output Video

Video bandwidth (see Note 1)	525i: Y; 30 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (-2.0 dB) P _B , P _R ; 30 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (-2.0 dB) 625i: Y; 25 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (-2.0 dB) P _B , P _R ; 25 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (-2.0 dB) (Note 1: When playing back a tape recorded with digital input signals)
S/N ratio	Better than 60 dB
K factor (2T)	Less than 1%

Video Input Connectors

Reference input	Analog composite, BNC × 2, loop-through, 75Ω ON/OFF selectable
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Specifications

Video Output Connectors

Analog component output	BNC × 3 (Y, Pb, Pr) Y: 1.0 Vp-p, 75Ω Pb, Pr: 0.525/0.757 Vp-p switchable, 75Ω (75% color bar, 0% setup)
Analog composite output	BNC × 3, video 1, video 2, video 3 (superimpose ON/OFF)
Serial digital component output	BNC × 3, complies with the SMPTE259M-C standard SDI 1, SDI 2, SDI 3 (superimposed ON/OFF)
SDTI output (option)	BNC × 1, complies with the SMPTE305M standard (use of SDI 1 output connector shared)

Video Signal Adjustment Ranges

Video output gain	±3 dB
Video output chroma gain	±3 dB
Video output chroma phase	±30°
Video output setup	±14 IRE
Video output sync phase	±15 μsec
Video output SC phase	±180°

AUDIO

Digital Audio

Sampling frequency	48 kHz (synchronized with video)
Quantizing	16 bits
Frequency response	20 Hz to 20 kHz ±1.0 dB (at reference level)
Dynamic range	Better than 90 dB (1 kHz, emphasis OFF, A weighted)
Distortion	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter	Below measurable limit
Head room	525i: 20 dB 625i: 18 dB
De-emphasis	T1 = 50 μsec, T2 = 15 μsec (selected automatically)

Cue Track

Frequency response	300 Hz to 6 kHz ±3 dB
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Audio Output Connectors

Analog output (CH1/CH2/CH3/CH4)	XLR × 4, low impedance, +4/0/-20 dBu, selectable using menu item setting
Digital output (CH1/CH2, CH3/CH4)	XLR × 2, AES/EBU format
Serial digital output	Complies with SMPTE259M-C/272M standard (BNC, 75Ω)
Cue track output	XLR × 1, low impedance, +4/0/-20 dBu, selectable using menu item setting
Monitor output	XLR × 2, low impedance, +4/0/-20 dBu, selectable using menu item setting
Headphones output	1/4" phone, 8Ω, variable level

Other Input/Output Signal Connectors

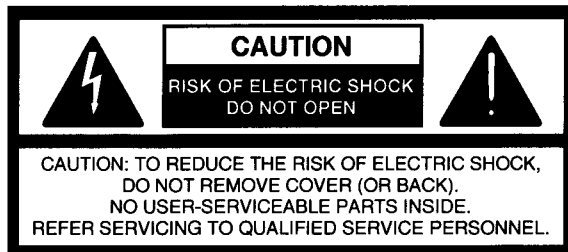
Time code output	XLR × 1, 2.0 Vp-p, low impedance
RS-422A input	D-sub 9-pin, RS-422A interface
RS-422A output	D-sub 9-pin, RS-422A interface
RS-232C	D-sub 25-pin, RS-232C interface
Parallel input/output	D-sub 25-pin
Encoder remote	D-sub 15-pin

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

IMPORTANT

"Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

AJ-D940_P



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL BOARD TO AUTHORIZED SERVICE PERSONNEL.

FCC Note:

This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

 is the safety information.

- Do not insert fingers or any objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the unit and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the unit when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Do not attempt to disassemble the unit.
There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the unit examined for possible damage.
- Refer any needed servicing to authorized service personnel.

IMPORTANT

"Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

■ **THIS APPARATUS MUST BE EARTHED**

To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

■ **DO NOT REMOVE PANEL COVER BY UN-SCREWING**

To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:

Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSOIRES ONLY.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL BOARD TO QUALIFIED SERVICE PERSONNEL.

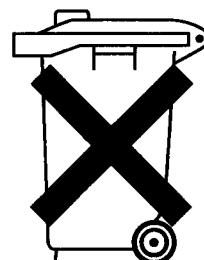
Operating precaution

Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio signals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

 is the safety information.

Attention/Attentie

- This apparatus contains a lithium battery for memory back-up.
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your dealer.
- Do not throw away the battery. Instead, hand it in as hazardous waste.
- Dit apparaat bevat een lithiumbatterij voor memory back-up.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.



Caution for AC Mains Lead

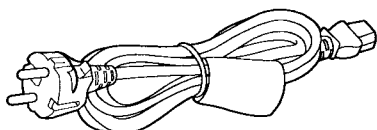
FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.

Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

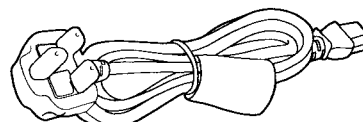
FOR CONTINENTAL EUROPE, ETC.

Not to be used in the U.K.



FOR U.K. ONLY

If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.





FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 13 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.


If in any doubt please consult a qualified electrician.

WARNING: THIS APPLIANCE MUST BE EARTHED.

IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

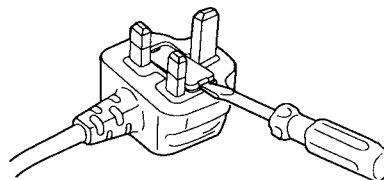
Green-and-Yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

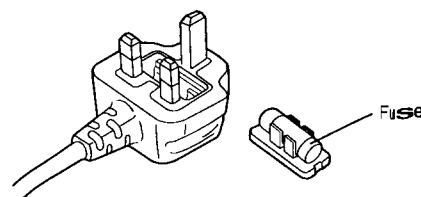
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



Specifications

AJ-D940_E

GENERAL

Power supply voltage	AC 220 – 240V, 50 – 60 Hz
Power consumption	215W (full operation)

Operating ambient temperature	5°C to 40°C
Operating ambient humidity	10% to 90% (no condensation)
Weight	17.4 kg
Dimensions	424 (W) × 175 (H) × 415 (D) mm (excluding unit's feet, jacks and jog dial)
Playback format	DVCPRO50/DVCPRO formats
Playback video signals	625i/525i selectable
Playback audio signals	DVCPRO50: 48 kHz, 16 bits, 4 channels DVCPRO: 48 kHz, 16 bits, 2 channels
Playback tracks	Digital/video/audio tracks: Helical tracks Time codes are recorded in sub-code area. Cue track: 1 track Control track: 1 track
Tape speed	67.708 mm/sec (625i) 67.640 mm/sec (525i)
Playback time	92 min. (using AJ-5P92LP)
Tape used	Metal tape
FF/REW time	Less than 3 min. (using AJ-5P92LP)
Search speed	±32× normal speed (colour)
Digital slow	Plus direction: +1× for DVCPRO50 +2× for DVCPRO Minus direction: -1× for DVCPRO50 -2× for DVCPRO
Editing accuracy	±0 frame (using time code)
Tape timer accuracy	±1 frame (using continuous CTL signal)
Servo lock time	Less than 0.5 sec (colour framing/standby ON)

VIDEO

Sampling frequencies	DVCPRO50 625i/525i: Y; 13.5 MHz/P _B , P _R ; 6.75 MHz
Quantizing	8 bits
Video compression method	DCT + adaptable quantizing + variable length code
Video compression rate	DVCPRO50: 1/3.3 DVCPRO: 1/5
Error correction	Reed-Solomon product code
Video recording bit rate	DVCPRO50: 50 Mbps DVCPRO: 25 Mbps

Analogue Component Output Video

Video bandwidth (see Note 1)	625i: Y; 25 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB) P _B , P _R ; 25 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB) 525i: Y; 30 Hz to 5.5 MHz (±0.5 dB), 5.75 MHz (–2.0 dB) P _B , P _R ; 30 Hz to 2.5 MHz (±0.5 dB), 2.75 MHz (–2.0 dB) (Note 1: When playing back a tape recorded with digital input signals)
S/N ratio	Better than 60 dB
K factor (2T)	Less than 1%

Video Input Connectors

Reference input	Analogue composite, BNC × 2, loop through, 75Ω ON/OFF selectable
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Specifications

AJ-D940_E

Video Output Connectors

Analogue component output	BNC × 3 (Y, P _B , P _R) Y: 1.0 Vp-p, 75Ω P _B , P _R : 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite output	BNC × 3, video 1, video 2, video 3 (superimpose ON/OFF)
Serial digital component output	BNC × 3, complies with the EBU Tech. 3267-E standard SDI 1, SDI 2, SDI 3 (superimposed ON/OFF)
SDTI output (option)	BNC × 1, complies with the SMPTE 305M standard (use of SDI 1 output connector shared)

Video Signal Adjustment Ranges

Video output gain	±3 dB
Video output chroma gain	±3 dB
Video output chroma phase	±30°
Video output setup	±100 mV
Video output sync phase	±15 μsec
Video output SC phase	±180°

AUDIO

Digital Audio

Sampling frequency	48 kHz (synchronized with video)
Quantizing	16 bits
Frequency response	20 Hz to 20 kHz ±1.0 dB (at reference level)
Dynamic range	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion	Less than 0.05% (1 kHz, emphasis OFF, reference level)
Crosstalk	Less than -80 dB (1 kHz, between 2 channels)
Wow & flutter	Below measurable limit
Head room	625i: 18 dB 525i: 20 dB
De-emphasis	T1 = 50 μsec, T2 = 15 μsec (selected automatically)

Cue Track

Frequency response	300 Hz to 6 kHz ±3 dB
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Audio Output Connectors

Analogue output (CH1/CH2/CH3/CH4)	XLR × 4, low impedance, +4/0/-20 dBu, selectable using menu item setting*
Digital output (CH1/CH2, CH3/CH4)	XLR × 2, AES/EBU format
Serial digital output	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track output	XLR × 1, low impedance, +4/0/-20 dBu, selectable using menu item setting*
Monitor output	XLR × 2, low impedance, +4/0/-20 dBu, selectable using menu item setting*
Headphones output	6.35 mm, 8Ω, variable level

Other Input/Output Signal Connectors

Time code output	XLR × 1, 2.0 Vp-p, low impedance
RS-422A input	D-sub 9-pin, RS-422A interface
RS-422A output	D-sub 9-pin, RS-422A interface
RS-232C	D-sub 25-pin, RS-232C interface
Parallel input/output	D-sub 25-pin
Encoder remote	D-sub 15-pin

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

* EG model is fixed to -3 dBu.

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1\text{M}\Omega$ and $5.2\text{M}\Omega$.
When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

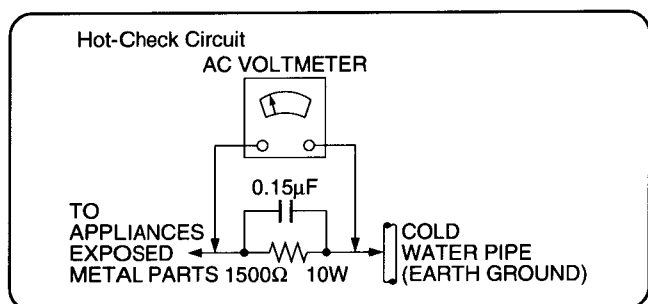


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. Plug the AC cord directly into the AC outlet.
Do not use an isolation transformer for this check.
2. Connect a $1.5\text{k}\Omega$, 10 W resistor, in parallel with a $0.15\mu\text{F}$ capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV , $\pm 0.15\text{kV}$. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

MEMO

SECTION 1

OPERATING INSTRUCTIONS

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NTSC

PAL

Operating instruction for AJ-D940P

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Before attempting to operate the unit, check that all the accessories are present and accounted for.

Power cord.....1 pc

Options

- AJ-CS750P cassette adapter
- AJ-MA75P rack-mounting adapters

Introduction and Features

The AJ-D940 is a multi-purpose studio digital VTR which uses 1/4-inch wide compact cassette tapes and which is designed exclusively for slow-motion playback with a high picture quality at a 50 Mbps video recording rate. It is capable of playing back existing DVCPRO (25 Mbps) cassette tapes as well. It is equipped with a 525/625 switchable function to enable it to be operated as a studio VTR anywhere in the world.

This VTR with its high picture quality, which is due to the incorporation of digital compression technology, significantly reduces the deterioration in the quality of both sound and pictures which accompanies dubbing operations. Its compact 4U size and light-weight design makes it easy for the unit to be carried around and installed in a 19-inch rack.

A dialogue system enables the unit's setup settings to be performed while monitoring the on-screen menus that appear on the TV monitor.

Features

Compact size and light weight

This digital VTR has a 4U size. This means that it is easy to install it in a 19-inch rack, too, if the rack-mounting adapters (optional accessory, AJ-MA75P) are used.

Up to 92 minutes of playback time

Two sizes of cassette tape, the M size (for up to 33 minutes of playback time) and L size (for up to 92 minutes of playback time), can be used with this unit.

The tape has a 1/4-inch width for a compact design.

High picture quality

A high picture quality is achieved using 4:2:2 component signals whose recording rate is twice as high as that of the existing DVCPRO format.

525i/625i switchable function

By setting the 525i/625i selector switch to the setting that corresponds to the TV system of the signals (525i or 625i) recorded on the tape, the signals of either TV system can be played back.

Compatibility with DVCPRO format

Tapes recorded using the existing DVCPRO format can be played back on this unit.

Compatibility with general consumer video equipment

Cassette tapes designed for general consumer applications containing material shot by a consumer digital camera can be played back on this unit if the cassette adapter (optional accessory, AJ-CS750P) is used.

<Note>

Tapes recorded in the LP consumer mode cannot be played back.

Digital slow motion/dial jog functions

Using Panasonic's very own digital slow-motion technology, pictures played back in slow motion at the following speeds can be reproduced clearly.

DVCPRO50 (50 Mbps): -1x to +1x speed

DVCPRO (25 Mbps): -2x to +2x speed

DV: ±0.03x, ±0.07x, ±0.1x, ±0.2x, ±0.4x to ±1x

Dial shuttle function

Shuttle operations enable color pictures to be played back in the forward or reverse direction at a maximum of 32 times the normal tape speed.

Time code

The unit contains a time code reader (TCR).

Features

(continued)

Multi-functional interface capability

- **Serial digital output**
The unit is equipped with a component serial interface connector to enable interfacing with serial digital component signals. (SMPTE 259M-C, 272M)
- **Analog video output**
Both component (Y, P_B, P_R) and composite output connectors are provided.
- **AES/EBU audio output**
The unit comes with digital audio output connectors.
- **SDTI output (option)**
- **9-pin RS-422A/RS-232C remote**
In addition to the standard 9-pin serial remote (RS-422A) connector, both RS-232C and 25-pin parallel remote connectors are provided.

4-channel digital audio for high sound quality

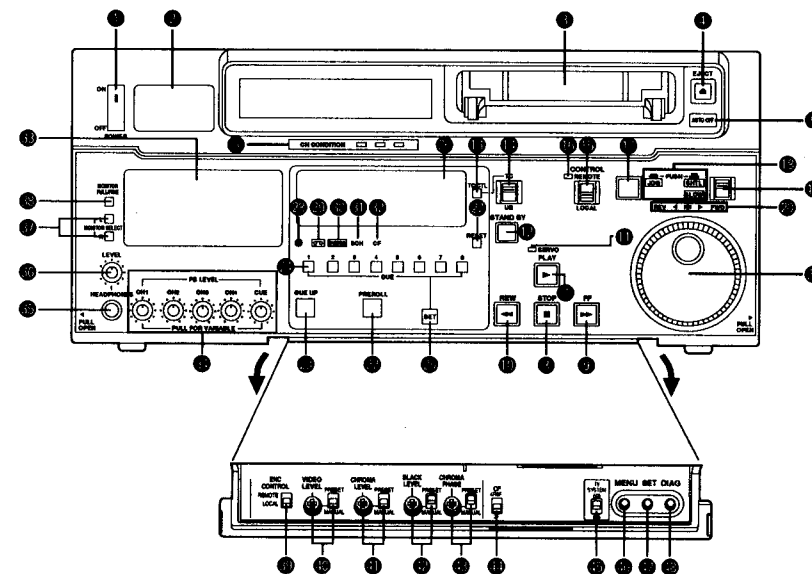
A 4-channel PCM audio capability plus another channel for the analog cue track is featured.

Menu-operated setup

The settings for the setup prior to operating the unit are performed while viewing the setup menus which appear on the unit's display or the TV monitor.

Parts and Their Functions

Front panel



<Front panel top area>

❶ POWER switch

❷ TV system and format display

The selected TV system and format are displayed here.

<525/625>

525: This lights when the 525 TV system is selected.

625: This lights when the 625 TV system is selected.

<25 Mbps/50 Mbps>

25 Mbps: This indicates the DVCPRO (25 Mbps) and DV playback mode.

In the case of the DVCPRO (25 Mbps) playback mode, the DVCPRO (25 Mbps) cassette playback display lamp ❸ in the center of the front panel also lights.

50 Mbps: This indicates the DVCPRO50 (50 Mbps) playback mode.

❸ Cassette insertion slot

❹ EJECT button

When this button is pressed, the tape inside is unloaded and several seconds later it is automatically ejected.

If the counter display area is set to the CTL display, the display will be reset.

❺ Channel condition lamps

One of these lamps lights in accordance with the error rate statuses. (Green→Amber→Red)

Green: This lamp lights when the error rates for both the video and audio playback signals are at an acceptable level.

Amber: This lamp lights when the error rate for either the video and audio playback signals has deteriorated. A normal playback picture will appear even when this lamp is lighted.

Red: This lamp lights when either the video or audio playback signals are subject to correction or interpolation.

❻ AUTO OFF lamp

This lights when trouble has occurred in the unit's operation.

Parts and Their Functions (continued)

<Front panel center>

❶ PLAY button

This button is pressed to commence playback.

❷ STOP button

This button is pressed to stop the tape travel.

The tape drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.

When the stop mode continues beyond the prescribed period of time, the unit is automatically set to the standby OFF mode in order to protect the tape.

The stop mode is established immediately after a cassette has been inserted into the unit.

❸ FF button (see *1)

This button is pressed to fast forward the tape.

❹ REW button (see *1)

This button is pressed to rewind the tape.

❺ SERVO lamp

This lamp lights when the drum servo and capstan servo lock.

❻ STANDBY button

While the same level of tape tension is applied as in the regular stop mode and the head drum continues to rotate, the lamp in the button lights to indicate that the standby ON mode is established.

The tape is set to the half-loading mode when the standby OFF mode is established. When this button is pressed in the stop mode, the standby OFF mode is established and the tape is set to the half-loading mode. At this time, the lamp in the button will go off.

When the stop mode continues beyond the prescribed period of time, the unit is automatically set to the standby OFF mode in order to protect the tape.

When either this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established. When a function button other than the STOP button is pressed, the tape will be set to the mode corresponding to the pressed button.

The time taken for operation to transfer to the standby OFF mode can be set on-screen.

❼ TC/CTL switch

When this switch is pressed, what appears on the counter display changes from TC to CTL or vice versa. When TC is selected, either the TC or UB value will be displayed depending on the position to which the TC/UB switch has been set.

❽ TC/UB switch

This selector switch is used to indicate either the TC value or UB value on the counter display area when the TC/CTL switch has been set to the TC position.

❾ REMOTE/LOCAL switch

This switch is provided to enable the unit to be controlled from an external source using the REMOTE, RS-232C or parallel connector.

REMOTE: Set here when the unit is to be controlled using the 9-pin REMOTE, RS-232C or parallel remote connector.

LOCAL: Set here when the unit is to be controlled using the controls on its operation panel.

*1 The fast forward or rewind speed can be selected using setup menu item No. 102 (FF.REW MAX).

<Front panel center>

⑮ REMOTE lamp

This lamp lights when the REMOTE setting has been selected by the REMOTE/LOCAL switch.

⑯ Search button

This button is pressed to establish the search mode.

When this button is pressed after the search dial is set to the shuttle mode and turned to the desired position, playback will commence at the speed which has been set by the search dial.

⑰ JOG, SHTL and SLOW lamps

These lamps indicate the current status of the search dial and SHTL/SLOW switch.

JOG: This lights when the JOG mode is established.

SHTL (shuttle): This lights when the SHTL mode is established.

SLOW: This lights when the VAR mode is established.

⑱ SHTL/SLOW switch

This selector switch is set when the search dial is to be used for SHTL or VAR purposes.

⑲ REV, STILL and FWD lamps

These lamps light in accordance with the search dial operation.

REV: This lights when the dial is rotated counterclockwise, and if the search button lamp is also lighted at this time, the tape travels in the reverse direction.

STILL: In the JOG mode this lights when the dial rotation is stopped, and if the search button lamp is also lighted at this time, the tape also stops traveling. In the shuttle mode, it lights when the dial is at the STILL position.

FWD: This lights when the dial is rotated clockwise, and if the search button lamp is also lighted at this time, the tape travels in the forward direction.

① Search dial

This dial is used to locate the edit points.

Each time the dial is pressed, the shuttle mode or jog mode is selected alternately, and the JOG, SHTL or SLOW lamp lights.

When the unit's power is turned on, the search dial will not work unless it is first returned to the STILL position.

SHTL (shuttle) mode: If the dial is rotated and stopped at the desired position when the SHTL/SLOW switch has been set to SHTL, the tape can be played back at the speed that corresponds to the angle to which the dial has been rotated. A still picture will appear when the dial is set to its center position.

When the SHTL/SLOW switch has been set to SLOW, the tape will travel at the $-4.1\times$ speed if the dial is rotated counterclockwise as far as it will go, a still picture will appear when it is set to its center position, and the tape will travel at the $+4.1\times$ speed if the dial is rotated clockwise as far as it will go. The maximum speed at the SLOW setting can be selected by setup menu item No. 320 (VAR FWD MAX) or No. 321 (VAR REV MAX).

Jog mode: The dial's clickstop positions are cleared, and the tape is played back at the speed (see *1) that corresponds to the speed with which the dial is rotated.

*1 DVCPRO50 (50 Mbps): $-1\times$ to $+1\times$ speed

DVCPRO (25 Mbps): $-2\times$ to $+2\times$ speed

DV: $-1\times$ to $+1\times$ speed

Parts and Their Functions (continued)

<Front panel center>

① PREROLL button

This button is used to cue the tape for a transmission, etc.

If it is pressed when a CUE point has been selected (when the CUE lamp is flashing), the tape is prerolled to the CUE point, and a still picture appears on the screen.

If it is pressed when a CUE point has not been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

• The preroll time can be set using setup menu item No. 000 (P-ROLL TIME).

② CUE UP button

This button is used to cue the tape for a transmission, etc.

If it is pressed when a CUE point has been selected (when the CUE lamp is flashing), the tape is prerolled to the CUE point, and a still picture appears on the screen.

If it is pressed when a CUE point has not been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

• The preroll time can be set using setup menu item No. 016 (CU-ROLL TIME).

③ CUE buttons 1 through 8

These buttons are used to enter, check or erase cue points.

When a button is pressed at a cueing position on the tape, the cue point will be entered in that button.

To check a cue point which has been entered, press the CUE button in which the point was entered.

To erase a cue point, press the RESET button while holding down the CUE button.

④ SET button

This button is used when cue points are to be entered or erased.

When it is pressed at the cueing position, the cue point will be entered and the corresponding CUE button's lamp will light. When it is pressed at positions to which the tape is successively cued, the CUE buttons in which no cue points have been entered will light in sequence starting with the lowest number, and the cue points will be entered.

When the RESET button is pressed while the SET button is held down, all the registered cue points will be deleted.

⑤ Counter display area

The TC and CTL count values as well as the messages and other on-screen information appear on the counter display area.

⑥ RESET button

When this button is pressed in the CTL mode, the display is cleared to "00:00:00:00."

⑦ Warning lamp

This lamp lights when a warning is issued.

⑧ Cassette insertion display lamp

This lamp lights when a cassette has been inserted into the unit.

⑨ DVCPRO (25 Mbps) cassette playback display lamp

This lamp lights when a cassette recorded using the DVCPRO (25 Mbps) format is played back.

⑩ SCH lamp

This lamp lights when the SCH phase of the external sync signal is within the specified range.

<Front panel center>

- ① **CF lamp**
This lamp lights when the color framing is locked.
- ② **Level meter**
The playback levels for channels 1, 2, 3 and 4 of the PCM audio signals and for the cue track signals are displayed by this meter.
- ③ **Audio output level controls**
These controls are used to adjust the playback levels for channels 1, 2, 3 and 4 of the PCM audio signals and for the cue track signals.
They use a "pull to vary level" system which means that the levels can be adjusted after they have been pulled up. The unity (default) levels apply when they are pushed down.
- ④ **Headphones jack**
When a pair of stereo headphones are connected to this jack, the sound being played back can be monitored through the headphones.
- ⑤ **Volume control**
This control is used to adjust the headphones volume and monitor output volume.
Setup menu item No. 713 (MONI OUT) can be used to set whether the headphones output and monitor output are to be linked together or separated. (However, the headphones are always linked to the monitor output.) When the two outputs are separated, the monitor output is set the unity (default) level.
- ⑥ **MONITOR SELECT switches**
These switches are used to select the audio signals which are to be output to the monitor L and R channels.
Each time the "L" button is pressed, the signals which are to be output to the monitor L channel are switched in the following sequence: CH1, CH2, CH3, CH4, CUE, CH1, etc.
[This switching is disabled when CH1+2 or CH3+4 has been selected as the setup menu item No. 729 (MONI MIX L) setting.]
Each time the "R" button is pressed, the signals which are output to the monitor R channel are switched in the following sequence: CH1, CH2, CH3, CH4, CUE, CH1, etc.
[This switching is disabled when CH1+2 or CH3+4 has been selected as the setup menu item No. 730 (MONI MIX R) setting.]
The signals which have been selected are indicated by the L or R lamps which light on the level meter display area. [When AUTO has been selected as the setup menu item No. 721 (MONI CH SEL) setting, the display is switched in tandem with the monitor output.]
- ⑦ **METER (FULL/FINE) selector switch**
This switch is used to select the scale display on the audio level meter.
FULL mode: The standard scale (ranging from $-\infty$ to 0 dB) is selected.
FINE mode: The scale in 0.5 dB increments is selected.

Parts and Their Functions (continued)

<Front panel bottom>

- ⑧ **ENCODER CONTROL switch**
This switch is used to select whether the adjustments of the video output signals are to be performed using the controls either on the unit or on an external encoder remote controller.
REMOTE: The video output signals are adjusted using the controls on the external encoder remote controller.
LOCAL: The video output signals are adjusted using the controls on the unit.
- ⑨ **VIDEO LEVEL control and switch**
These enable the video level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.
When the VIDEO LEVEL switch is set to PRESET, the video level is set to the unity (0 dB) level. When it is set to MANUAL, the video level can be adjusted using the control.
- ⑩ **CHROMA LEVEL control and switch**
These enable the chroma level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.
When the CHROMA LEVEL switch is set to PRESET, the chroma level is set to the unity (0 dB) level. When it is set to MANUAL, the chroma level can be adjusted using the control.
- ⑪ **SET UP LEVEL control and switch**
These enable the setup level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.
When the SET UP LEVEL switch is set to PRESET, the setup level is set to the unity (0 IRE) level. When it is set to MANUAL, the set-up level can be adjusted using the control.
- ⑫ **HUE LEVEL control and switch**
These enable the hue to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.
When the HUE LEVEL switch is set to PRESET, the hue is set to the unity (0°) level. When it is set to MANUAL, the hue can be adjusted using the control.
- ⑬ **CF switch**
This switch is used to select either 4- or 8-field or 2-field increments for the playback framing lock.
4F/8F: 525 mode = The framing is locked in 4-field increments.
625 mode = The framing is locked in 4 or 8-field increments. The setup menu item No. 108 (CAP.LOCK) setting is used to switch between 4-field or 8-field increments.
2F: The framing is locked in 2-field increments.
- ⑭ **TV SYSTEM selector switch**
This switch is used to select the TV system. For this setting to take effect, the power must be turned off and then turned back on.
525: The 525 interlace/59.94 Hz TV system is selected.
625: The 625 interlace/50 Hz TV system is selected.
For playback, make sure that the switch is set to the position that corresponds to the TV system, 525i or 625i, which was used when the tape was recorded.

<Front panel bottom>

⑭ MENU button

When this button is pressed, the setup menu appears on the TV monitor (but only when the VIDEO OUT 3 connector is used), and the setup menu number appears on the unit's display. When it is pressed again, the setup menu setting is exited and the original operation is restored.

⑮ SET button

When this button is pressed, the data which has been set on the setup menu is entered. After the data has been entered, the setup menu setting is exited and the original operation is restored.

⑯ DIAG button

When this button is pressed, the VTR information is displayed. When it is pressed again, the original display is restored.

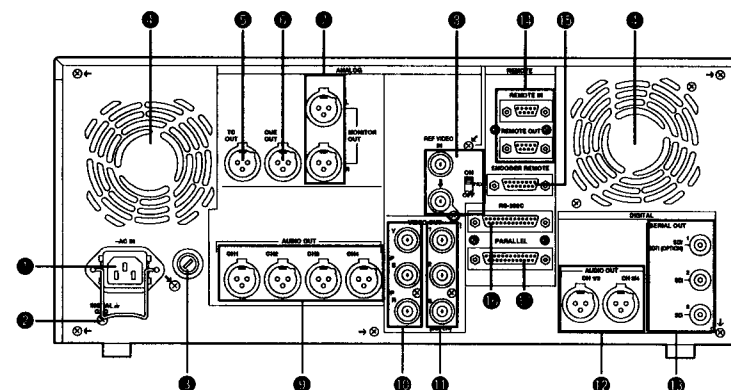
The VTR information consists of the HOUR METER information and WARNING information. The search button is pressed to switch between the displays of the two types of information.

Displayed on the HOURS METER screen are the deck's serial number, power-on time, drum rotation time, tape travel time, number of times the cassette has been loaded, and the number of times the power has been switched on and off.

Displayed on the WARNING screen is the nature of the warnings issued.

Parts and Their Functions

Connector panel



<Connector panel>

❶ AC IN socket

This is connected to the power outlet using the accessory power cord.

❷ SIGNAL GND terminal

This is connected to the signal ground terminal on the connected component for noise reduction purposes. It is not a safety ground.

❸ Fuse holder

This contains a fuse.

❹ Fan motor

This motor drives the fan that cools down the unit.

The ❶ lamp lights when trouble in some form or other has caused the fan motor to shut down. If operation is continued while this warning condition persists, the temperature inside the deck will rise, and once it has exceeded the safe temperature level, all the unit's operations will be shut down.

❺ TIME CODE OUT connector

The playback time code signals are output from this connector.

❻ CUE OUT connector

The analog signals recorded on the CUE track are output from this connector.

❼ MONITOR OUT connectors

The PCM audio signals of CH1, CH2, CH3 and CH4 or the playback signals from the CUE track are output from this connector.

❽ REF VIDEO IN connectors and 75Ω termination switch

These are the input connectors for the reference video signal.

Supply a composite video signal such as a black burst signal complying with the broadcast standards (see *1). Set the switch to ON for a 75Ω termination.

*1 525: RS-170A

625: CCIR624

❾ ANALOG AUDIO OUT connectors

The analog audio signals are output from these connectors.

❿ ANALOG COMPONENT VIDEO OUT connectors

The analog component video signals are output from these connectors.

⓫ ANALOG COMPOSITE VIDEO OUT connectors

The analog composite video signals are output from these connectors. Video signals with superimposed characters can be output from the VIDEO OUT 3 connector. Use setup menu item No. 007 (SUPER) to select ON or OFF as the superimposed character setting.

⓬ DIGITAL AUDIO OUT connectors

Digital audio signals complying with the AES/EBU standards are output from these connectors.

⓭ SERIAL DIGITAL COMPONENT AUDIO/VIDEO OUT connectors

Digital component audio and video signals complying with the SMPTE 259M-C/272M standards are output from these connectors.

Parts and Their Functions (continued)

<Connector panel>

❶ Remote control connectors

The unit can be operated from an external source when it is connected with another player for deck-to-deck editing or with an external controller. There are two remote control connectors, one for input signals (IN) and the other for output signals (OUT).

IN: To be connected with an external controller.

To be connected for deck-to-deck operations.

OUT: To be connected for parallel run operations.

To be used for loop-through applications.

❷ ENCODER REMOTE connector

This is connected to an external encoder remote controller when the video output signal settings are to be adjusted from an external source.

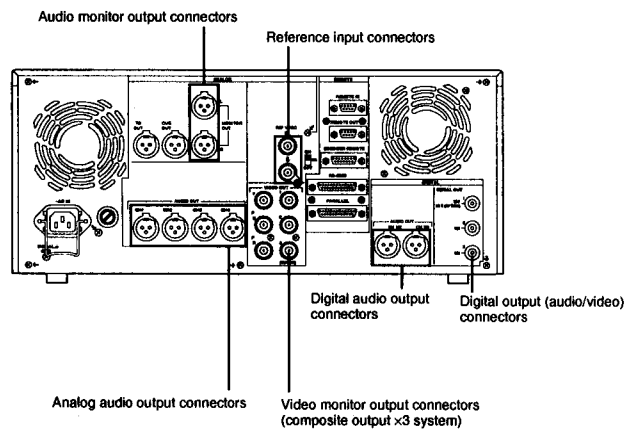
❸ RS-232C connector

❹ PARALLEL REMOTE connector

This is used when the unit is to be operated from an external source.

Connections using one unit

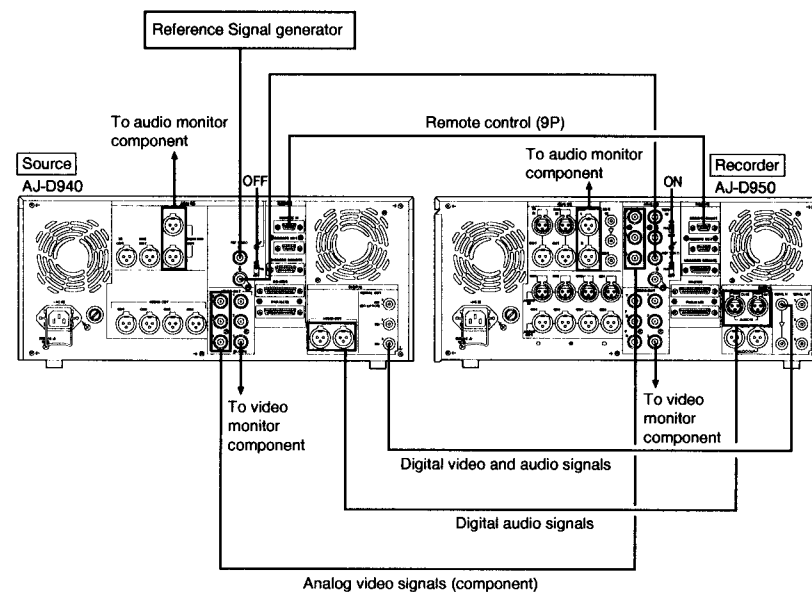
Set the CONTROL switch on the front panel to LOCAL.



Example of connections when the unit is used as the source machine for editing (deck-to-deck editing)

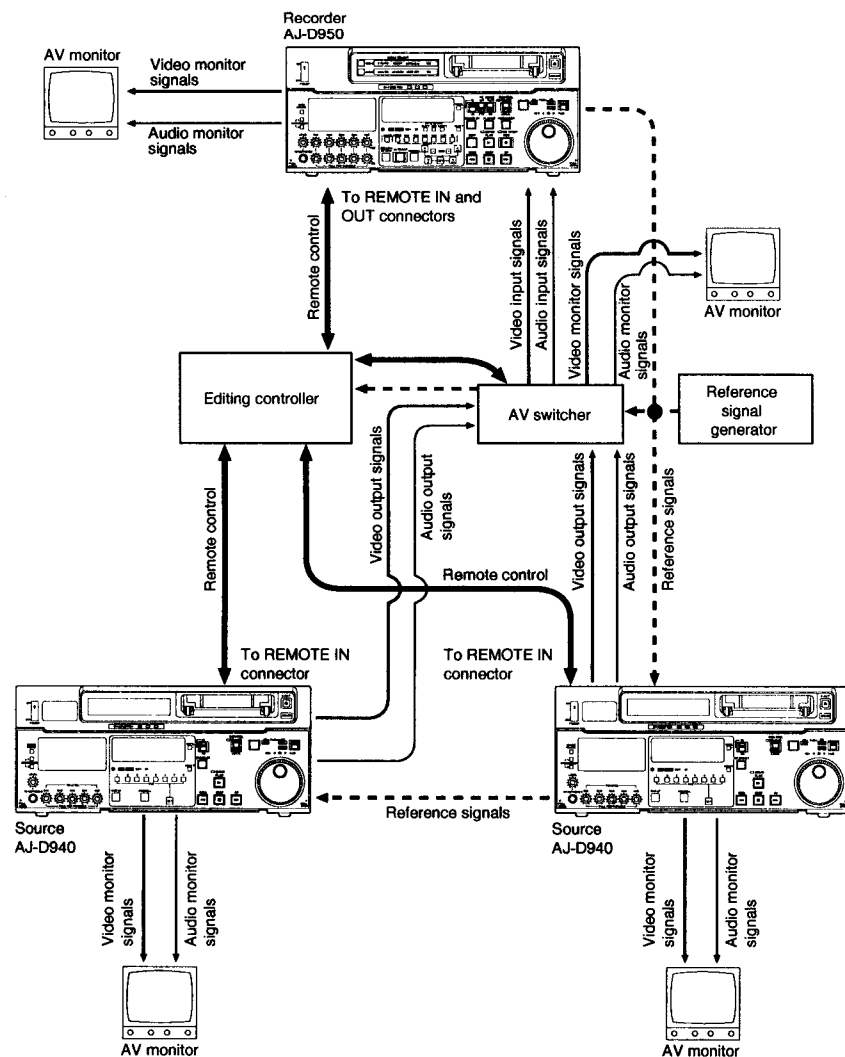
Source unit: Set the CONTROL switch on the front panel to REMOTE.

Recorder unit: Set the CONTROL switch on the front panel to LOCAL.



AJ-D950:
The analog input/output signal interface kit board (optional accessory) must be installed for use.

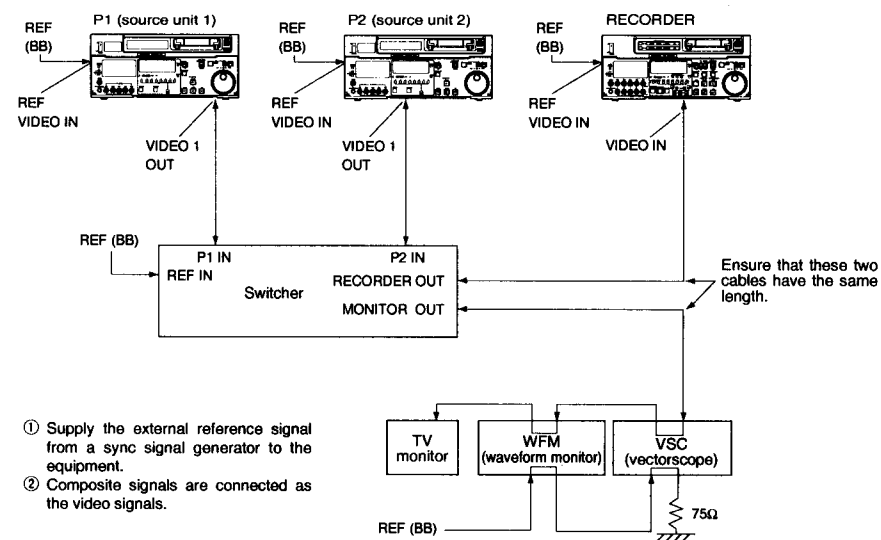
Example of connections with an editing controller



<Note>

If an editing controller made by CMX is to be used, steps must be taken at the editing controller side to support it.

Connections for adjusting the video output signals (encoder output)

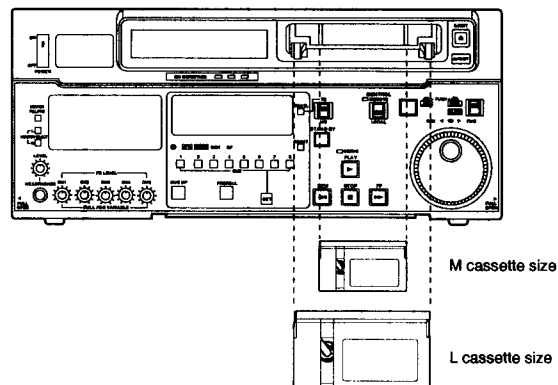


- ① Supply the external reference signal from a sync signal generator to the equipment.
- ② Composite signals are connected as the video signals.

Tapes

Type		Description
Consumer cassette (S size cassette)		These tapes are exclusively used with general consumer camera/recorders. They can be played back on the unit if a cassette adapter AJ-CS750P (available as an optional accessory) is used. However, bear in mind that long-playing cassette tapes (80 minutes in the standard mode; 120 minutes in the LP mode) cannot be used. It is recommended that Panasonic's DV tapes for general consumer applications be used. Bear in mind that inserting one of these cassette tapes without first installing the cassette adapter will cause malfunctioning.
M size cassette		Tapes with a maximum playback time of 33 minutes. (AJ-5P23MP, AJ-5P33MP)
L cassette	DVCPRO (50 Mbps)	Tapes with a maximum playback time of 92 minutes. (AJ-5P63LP, AJ-5P92LP)
	For consumer use	Standard playback cassette tapes for consumer use. For playback, select DV as the setup menu item No. 014 (FORMAT SEL) setting. Use of Panasonic's consumer-use DV tapes is recommended.

Align the cassette with the center of the insertion slot, and gently push it inside. The cassette tape is automatically loaded.



<Note>

For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

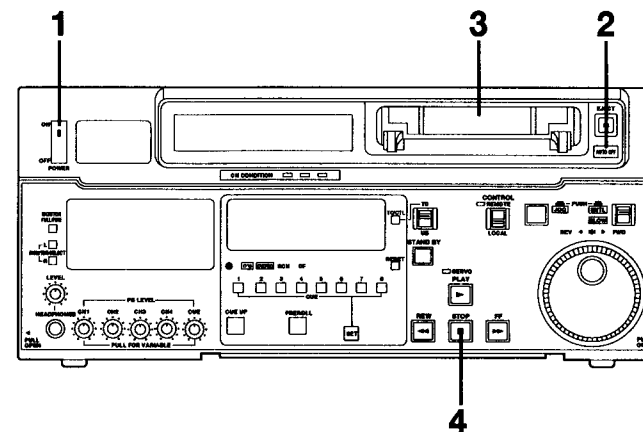
<Precautions when playing back general consumer DV tapes>

- General consumer tapes recorded in the LP mode cannot be played back.
- When material recorded on a general consumer tape is to be edited, either use a DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) tape or record the material on another VTR used for broadcast applications.
- The maximum speed at which general consumer tapes can be advanced is 32 times the normal tape speed.
- The maximum still mode time for general consumer tapes is set to 10 seconds.
- *Leaving up a general consumer tape at the same position should be kept to the minimum in order to protect the tape from damage.*
- The maximum time for STILL TIMER when a general consumer tape is used is set to 10 seconds, and the total time during which such a tape may be left standing in the STILL mode is set to 1 minute.

Switching on the Power/Inserting the Cassette

Before starting to operate the unit, check that the equipment has been connected properly.

- 1 Turn on the power.
- 2 Check that the AUTO OFF lamp is off. In the event of condensation or other trouble, the AUTO OFF lamp lights, and all of the unit's operations are disabled.
- 3 Insert the cassette tape. Insert the tape into the prescribe position without forcing it in any way.
- 4 Check that the STOP lamp is lighted. When the tape is inserted, the cylinder starts rotating automatically, the tape is loaded, and the STOP mode is established. The EJECT lamp now goes off.

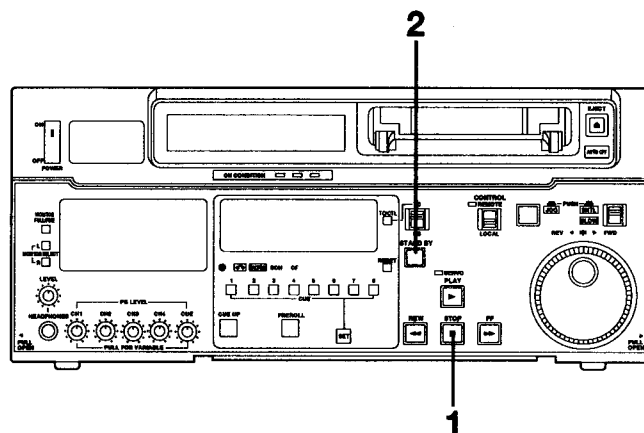


STOP/STANDBY mode

- 1** The stop mode is established when the STOP button is pressed.
The STOP lamp lights, and the tape stops traveling.
 - In order to protect the tape, the standby OFF mode is established after the time set in setup menu item No. 400 (STILL TIMER) has elapsed.When the STOP, REW, FF or PLAY button is pressed, the corresponding mode is established.
- 2** When the STANDBY button is pressed, the standby ON or OFF mode is established.
The standby ON mode is established while the button's lamp is lighted.
When the button is pressed in the stop mode, the standby OFF mode is established, the tape is set to the half-loading status, and the button's lamp goes off.
When the button is pressed in the standby OFF mode, the standby ON mode is established.

<Precautions for the STILL TIMER setting>

- Remember that at times when the same material is repeatedly used such as when programs are aired, the cumulative standby time in the same position will be increased.
- In order to protect the tape, make the standby time at the same tape locations as short as possible: for instance, select a maximum of 30 seconds or so as the setup menu item No. 400 (STILL TIMER) setting.



Playback

- 1** Insert the cassette tape and set the unit to the STOP mode.
- 2** Press the PLAY button. Normal playback now commences.
- 3** Adjust the audio playback levels. Pull out the audio level controls, and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept at their pushed-in positions (unity level).
- 4** To end playback, press the STOP button.
The unit is now set to the stop mode.

<Note>

Check that the SERVO lamp remains lighted during playback. The playback pictures will be disturbed if the lamp is flashing or off.

Jog/Shuttle

Jog mode

- 1 Push the search dial to set it to its "in" position. Check that the JOG lamp is lighted.
- 2 Rotate the search dial.
The clickstop positions of the dial are cleared, and the tape is played back at a speed ($-1\times$ to $+1\times$) corresponding to the speed at which the dial is rotated. When the rotation of the dial is stopped, a still picture appears. The playback picture is free from noise.
- 3 To transfer operation from the jog mode to another mode, press the button which corresponds to the mode which is to be transferred to.

Shuttle mode

- 1 Push the search dial to release it from its "in" position.
The SHTL lamp now lights, and the shuttle mode is established.
• Immediately after the power is turned on, rotate the search dial and set it to its center position.
- 2 Set the SHTL/SLOW switch to the SHTL or SLOW position.
- 3 Rotate the search dial.
When the SHTL/SLOW switch is set to the SHTL position, the speed of the playback picture is varied in the 0 to $\pm 32\times$ range depending on the dial's position. (The speed can be switched to $\pm 8.4\times$, $\pm 16\times$ or $\pm 32\times$ using setup menu item No. 101 (SHTL MAX).)
The dial is set to the clickstop at the center: at this position a still picture appears on the screen.
When the SHTL/SLOW switch is set to the SLOW position, the speed of the playback picture is varied in the $-4.1\times$ to $+4.1\times$ range depending on the dial's position. (The maximum speed can be selected using setup menu item No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX). However, noise will appear at any speed outside the $-1\times$ to $+1\times$ range for the DVCPRO50 (50 Mbps) format, the $-2\times$ to $+2\times$ range for the DVCPRO (25 Mbps) format and the $-1\times$ to $+1\times$ range for the DV format.) The dial is set to the clickstop at the center: at this position a still picture appears on the screen.
The playback picture is free from noise.
- 4 To transfer operation from the shuttle mode to another mode, press the STOP button or another button.

<Note>

The unit is set at the factory in such a way that operation will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient to transfer directly to the variable speed mode, operation transfer can be set up to go through the search button. Set setup menu item No. 100 (SEARCH ENA) to KEY.

MULTI CUE Function

Entering CUE points

■ Automatic entry

Using the search dial or in the PLAY mode, press the SET button at the place where the tape is to be cued. The CUE button in which the CUE point was entered now lights.

Each time the SET button is pressed at the next place where the tape is to be cued, the CUE point will be entered into the CUE button, in which a CUE point has not yet been entered, in sequence starting with the button having the lowest number.

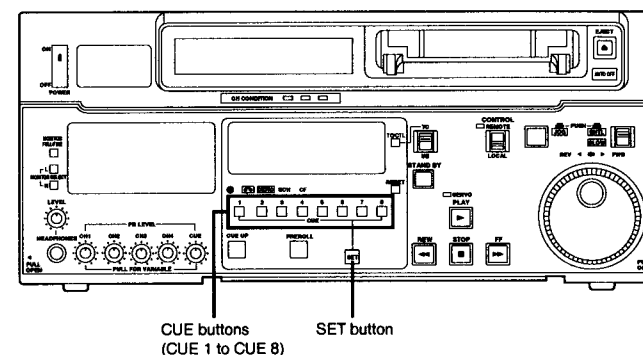
<Note>

When CUE points are entered in all 8 buttons, no further points will be entered even when the SET button is pressed. In this case, either overwrite an existing entry using the procedure for entry into a particular CUE button or reset the CUE point entry and then enter another CUE point.

■ Entry into a particular CUE button

There are two procedures for entering a CUE point into a particular CUE button.

- When a CUE point is to be entered into a CUE button in which no CUE point has been entered, press one of the CUE buttons (CUE 1 to CUE 8) directly at the place where the tape is to be cued. The lamp of the CUE button which was pressed now lights, indicating that the CUE point has been entered for that button.
- When a CUE point is to be entered into a CUE button in which a CUE point has already been entered, press the CUE button and SET button together at the place where the tape is to be used. In this case, the previous CUE point in the CUE button will be overwritten and a new CUE point will be entered.



Checking CUE points

Press one of the CUE buttons in which a CUE point has been entered to check the CUE point. The value of the entered CUE point appears on the display and the CUE button which was pressed now flashes. To release the flashing of the CUE button, either press the flashing CUE button or press another CUE button in which a CUE point has been entered. In this case, the flashing moves to the CUE button which was pressed.

■ Cueing up the tape to the CUE point

Press the CUE UP button while the CUE button is flashing. When this button is pressed, the tape is prerolled to the CUE point, and a still picture appears on the screen.

- The preroll time can be set using setup menu item No. 016 (CU-ROLL TIME).
- The mode to be established upon completion of the prerolling can be set to the STOP or STILL by setting setup menu item No. 315 (AFTER CUE-UP).

<Note>

If the button is pressed when no CUE point has been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

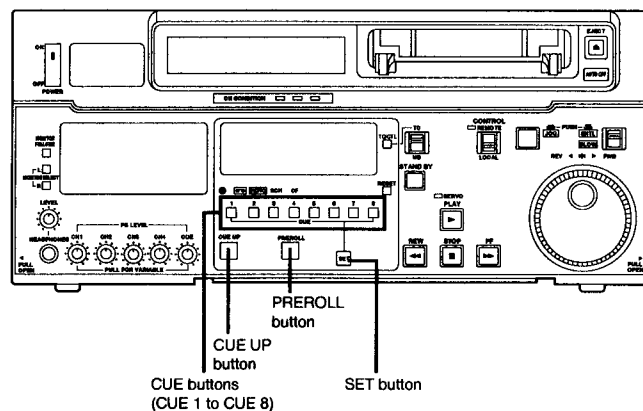
■ Prerolling the tape to the CUE point

Press the PREROLL button while the CUE button is flashing. When this button is pressed, the tape is prerolled to the CUE point, and a still picture appears on the screen.

- The preroll time can be set using setup menu item No. 000 (P-ROLL TIME).
- The mode to be established upon completion of the prerolling can be set to the STOP or STILL by setting setup menu item No. 315 (AFTER CUE-UP).

<Note>

If the button is pressed when no CUE point has been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.



MULTI CUE Function

Clearing CUE points

■ Clearing a particular CUE point

Press the RESET button while holding down the CUE button in which the point to be cleared has been entered. The entered CUE point will be reset, and the lamp of the CUE button concerned will go off at the same time.

■ Clearing all the CUE points together

Press the RESET button while holding down the SET button. All the entered CUE points will be reset and all the lamps of the CUE buttons will go off at the same time.

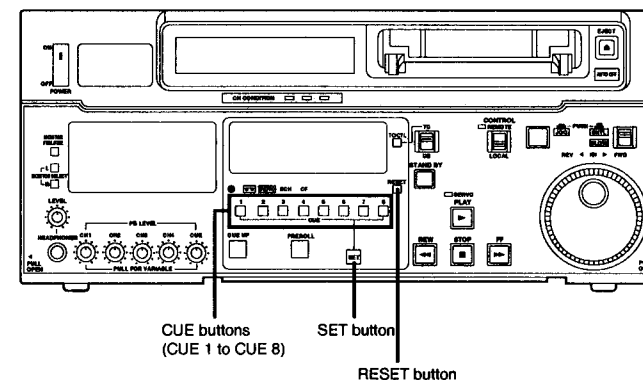
<Notes>

- The following applies when the CTL mode has been set.

When the RESET button is pressed while the SET button is held down, all the entered CUE points will be reset but the CTL value will not be reset.

Conversely, when the SET button is pressed while the RESET button is held down, all the entered CUE points will be reset and the CTL value will also be reset.

- The entered CUE points are not reset even when the tape is ejected. In the CTL mode, only the CTL value is reset.



Video Output Signal (Encoder Output) Adjustments

In order to ensure an accuracy which is free from errors during editing when proceeding with AB roll editing (editing using two source units) using editors, it is necessary to adjust the video output signal (ENCODER OUT) after the system connections have been performed. (These adjustments must be performed again each time a connecting cable has been replaced or the connections are changed.)
The adjustment procedure for this unit is described below.

- 1 Check the connections. (See page 20)
- 2 Set the **REMOTE/LOCAL** switch at the bottom of the front panel to the adjustment position (LOCAL).
REMOTE: The video output signals are adjusted using the external encoder remote controller.
LOCAL: The video output signals are adjusted using the controls on this unit.
- 3 Perform the adjustments separately for each source unit.
 - 3-1 **When the preset values are to be used**
 Set the PRESET/MANUAL switches for VIDEO LEVEL, CHROMA LEVEL, SETUP and HUE to the PRESET position.
 - 3-2 **When adjusting the video output signals without using the PRESET values**
 - 1 Play back a cassette tape on which standard color bars have been recorded.
 - 2 Adjust the controls in such a way that the following will appear on the waveform monitor (WFM) and vectorscope (VSC).

A Setup level:

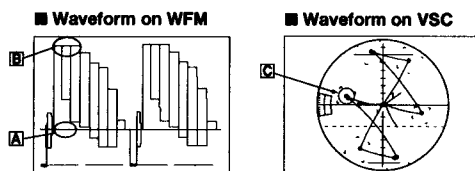
Adjust in such a way as to eliminate any deviation.

B Video level:

Adjust to 100 IRE.

C Chroma level and hue:

Adjust the two controls and place the vector waveform traces within the square grid mark.



- 4 Adjust the connected source units in the same way.

Setup (Default Settings)

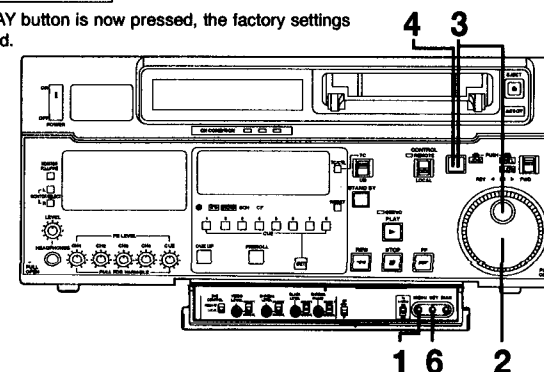
The unit's main settings are performed while making selections using a menu system. The setting menus will appear on a TV screen when the VIDEO OUT 3 connector on the connector panel has been connected to a TV monitor.

Changing the settings

- 1 Press the MENU button.
 The setup menu screen appears on the TV monitor, and the setup menu item number appears on the unit's counter display.
 (When setup has already been performed, the screen showing the changes made last is displayed.)
- 2 Rotate the search dial and select the item to be set.
 The cursor (*) moves on the menu screen, and the item number on the display flashes.
 • When the dial is rotated clockwise, the flashing item number is incremented (001 → 002 → 003 → 004 → and so on); when it is rotated counterclockwise, it is decremented.
 • When the FF or REW button is pressed while the PLAY button is held down, the next or previous item is selected.
 • Use the search dial in the JOG mode whenever possible.
- 3 Rotate the search dial while holding down the search button at the position where the change is to be made. The menu screen and setting on the display flash.
 When the dial is rotated clockwise, the setting is incremented; when it is rotated counterclockwise, it is decremented.
- 4 Release the search button when the settings are completed. The item number now flashes.
 • When the search dial is in the SHTL mode, the item will move unless the dial is held at the STILL position.
- 5 Repeat steps 2 to 4 if another item is to be changed.
- 6 Press the SET button. The changes made are now stored in the memory. To return the settings to what was set before the changes were made, press the MENU button.
 • To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. The following message will appear.

SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>

When the PLAY button is now pressed, the factory settings will be restored.



<Notes>

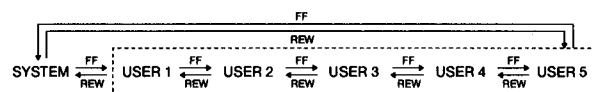
- When the RESET button is pressed to restore the factory settings, the change will be made for the user file in current use only. The other user files will not be affected.
- The changes made to the SYSTEM menu settings can be stored in the memory also by pressing the MENU button.

Setup (Setting) Menus

This unit offers five user files each of which can hold different menu settings. One of these files can be selected for use as the situation demands.

Changing the file

- 1 Press the MENU button.
- 2 When the FF button is pressed while the STANDBY button is held down, the next user file is selected in place of the current user file. Conversely, when the REW button is pressed while the STANDBY button is held down, the previous user file is selected in place of the current user file.



User files

Each user file has the following items.

- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

- 3 When the user file to be used has been selected in step 2, press the SET button. The user file is changed and stored in the memory.

<Note>

The SYSTEM menu items are not contained in user files 1 to 5. Therefore, to set the SYSTEM menu items, select the user file and switch to the SYSTEM file.

Setup Menus

The lock mode can be set to protect the settings in the system file and user files (USER2 to USER5). Once the lock mode has been set, it is no longer possible to change the settings. The setting and release of the lock mode can be performed using setup menu item No. 30 (MENU LOCK) for the system file and using setup menu item No. A03 (MENU LOCK) for the user files.

Setting and releasing the lock mode

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down to select the file for which the lock mode is to be set or released.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. 30 (MENU LOCK) for the system file or to No. A03 (MENU LOCK) for the user files.
- 4 Rotate the search dial while the search button is held down, and select whether to set or release lock mode.
Set lock: Set the setting to 0001 (ON).
Release lock: Set the setting to 0000 (OFF).

When the lock is set, "LOCKED" appears at the top of the menu screen. In addition, the counter display stops flashing and lights up.

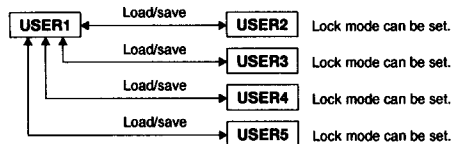
SETUP-MENU	LOCKED
<USER2>	No.000 - 0005
*000 P-ROLL TIME	5s
001 LOCAL ENA	ST&EJ
002 TAPE TIMER	±12h
003 REMAIN SEL	OFF
004 SETUP NUMBER	OFF
007 SUPER	ON
008 DISPLAY SEL	T&STA
009 CHARA H-POS	5
010 CHARA V-POS	23

- 5 Press the SET button. The setting is now stored in the memory.

<Notes>

- The lock mode cannot be set for the USER1 file.
- Once a file has been set to the lock mode, it cannot be reset to the factory settings even when the RESET button is pressed.

The contents of the USER2 to USER5 files can be copied (loaded) to the USER1 file. Alternatively, the contents of the USER1 file can be copied (saved) to the USER2 to USER5 files.



Loading a user file

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down and select USER1.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. A00 (LOAD).

```

SETUP-MENU MENU
<USER1> NO.A00 - 0000
804 BLANK LINE BLANK
*A00 LOAD USER2
A01 SAVE USER2
A02 P.ON LOAD OFF
END
  
```

- 4 Rotate the search dial while the search button is held down, and select the user file which is to be loaded in USER1.
- 5 Press the SET button. The following messages now appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU LOAD

USER2 → USER1 OK?
YES<PLAY>/NO<STOP>
  
```

Counter display

```

TCR 00:00:00:00
SETUP LOAD U-2 → U-1
  
```

The number of the user file selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The settings in the user file selected in step 4 are loaded, and the USER1 menu display appears. If the STOP button is pressed instead, the USER1 menu display appears with its settings remaining unchanged.
- 7 Rotate the search dial, and move the cursor (*) on the menu screen to any item except No. A00 (LOAD) or No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If they are not going to be stored in the memory, press the MENU button instead of the SET button.

Setup Menus

Saving a user file

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down and select USER1.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. A01 (SAVE).

```

SETUP-MENU MENU
<USER1> NO.A00 - 0000
804 BLANK LINE BLANK
A00 LOAD USER2
*A01 SAVE USER2
A02 P.ON LOAD OFF
END
  
```

- 4 Rotate the search dial while the search button is held down, and select the user file in which the USER1 settings are to be saved. User files which have been set to the lock mode will not be displayed at this time. If all the user files are set to the lock mode, the "LOCKED" display appears, and the save operation cannot be performed.
- 5 Press the SET button. The following messages now appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU SAVE

USER1 → USER2 OK?
YES<PLAY>/NO<STOP>
  
```

Counter display

```

TCR 00:00:00:00
SETUP SAVE U-1 → U-2
  
```

The number of the user file selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The USER1 settings are saved in the user file selected in step 4. If the STOP button is pressed instead, the USER1 menu display appears with its settings remaining unchanged.
- 7 Rotate the search dial, and move the cursor (*) on the menu screen to any item except No. A00 (LOAD) or No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If they are not going to be stored in the memory, press the MENU button instead of the SET button.

Automatically calling a user file when the power is turned on

If the user file to be loaded is set in advance using setup menu item No. A02 (P.ON LOAD), the file will be loaded into USER1 automatically when the power is turned on.

Setup (Setting) Menus

SYSTEM menu

<SYSTEM>				
Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	WFM SEL	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015	CTL TC VIDEO SYNC RF_L1 RF_L2 RF_R1 RF_R2 RF_DL RF_DR ENV_L1 ENV_L2 ENV_R1 ENV_R2 ENV_DL ENV_DR	This enables various signals to be output from the VIDEO OUT2 output connector. 0: The CTL signal is output. 1: The time code signal is output. 2: The video output signal is output. 3: The sync signal is output. 4: The PB L13ch RF signal is output. 5: The PB L24ch RF signal is output. 6: The PB R13ch RF signal is output. 7: The PB R24ch RF signal is output. 8: The DV L12ch RF signal is output. 9: The DV R12ch RF signal is output. 10: The PB L13ch ENV signal is output. 11: The PB L24ch ENV signal is output. 12: The PB R13ch ENV signal is output. 13: The PB R24ch ENV signal is output. 14: The DV L12ch ENV signal is output. 15: The DV R12ch ENV signal is output.
11	SYS SC	0000 ... 0127 ... 0255	-127 ... 0 ... 128	System phase adjustment: total variable range = more than ± 180 degrees -: Advanced +: Delayed <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
12	SYS H	0000 ... 0108 ... 0216	-108 ... 0 ... 108	System phase adjustment: 74 ns steps -: Advanced +: Delayed <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
13	VIDEO PHASE	0000 ... 0032 ... 0064	-32 ... 0 ... 32	Video phase adjustment: 148 ns steps -: Advanced +: Delayed
14	SCH COARSE	0000 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90-degree increments -: Advanced +: Delayed (The SC phase changes; the H phase does not change.)
15	SCH FINE	0000 ... 0032 ... 0064	-32 ... 0 ... 32	CH phase adjustment: total variable range = more than ± 45 degrees (The SC phase changes; the H phase does not change.)
16	AV PHASE	0000 ... 0100 ... 0200	-100 ... 0 ... 100	This adjusts the phase of the audio output in relation to the video output phase: 20.8 μ s steps. -: The audio output phase advances ahead of the video output phase. +: The audio output phase lags behind the video output phase.

"_" denotes the factory setting.

Setup menus

SYSTEM menu

<SYSTEM> (continued)				
Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
17	SYS H RANGE	0000 0001	FULL FINE	This selects the variable range for SYSTEM H when the ENCODER REMOTE connector is connected. 0: $\pm 8 \mu$ sec. 1: -2 to $+2.7 \mu$ sec. <Note> • The setting will remain unchanged even if an operation is performed to restore the factory setting. • The FULL operation results regardless of this item's setting if SYSTEM H is varied using this unit instead of using the encoder remote controller.
18	SYS H OFFSET	0000 0001 0002 0003 0004 0005 0006	-3 -2 -1 0 1 2 3	System phase adjustment 0: -13.4μ sec. 1: -8.96μ sec. 2: -4.52μ sec. 3: 0 sec. 4: $+4.52 \mu$ sec. 5: $+8.96 \mu$ sec. 6: $+13.4 \mu$ sec. <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
19	SYS SC/H	0000 0001	REMOTE LOCAL	This sets whether the system phase is to be adjusted by the unit or from the external encoder remote controller. 0: The system phase is adjusted from the external encoder remote controller. 1: The system phase is adjusted by the unit. <Note> This setting does not take effect when the ENCODER CONTROL switch at the bottom of the front panel is set to LOCAL.
30	MENU LOCK	0000 0001	OFF ON	This selects whether the lock mode is to be set or released for the system file. 0: Lock is released (changes can be made). 1: Lock is set (no changes can be made). <Note> Setup menu item No. 00 (WFM SEL) can be changed at any time regardless of the setting of this menu item.

"_" denotes the factory setting.

Video output signal adjustments

The video output signal adjustments are made using the ENCODER CONTROL switch at the bottom of the front panel and the SYSTEM menu item No. 19 (SYS SC/H) setting. A control matrix of the adjustments is shown below.

Setting		Adjustment item		
ENCODER CONTROL switch	SYSTEM menu item 19: SYS SC/H	SYSTEM menu item 11: SYS SC 12: SYS H	SYSTEM menu item 17: SYS H RANGE	VIDEO LEVEL CHROMA LEVEL SET UP HUE
	LOCAL	Unit	Always FULL regardless of setting	Unit
	REMOTE	Unit		External encoder remote controller
	REMOTE	External encoder remote controller	FULL/FINE	

USER menus

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ... 0005 ... 0015	0S ... 5S ... 15S	This sets the time for the preroll which is initiated by the PREROLL button. It can be set from 0 to 15 seconds in 1-second increments.
001	LOCAL ENA	0000 0001 0002	DIS ST&EJ ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All the buttons can be operated.
002	TAPE TIMER	0000 0001	±12h 24h	This selects the 12- or 24-hour display for the CTL counter. 0: 12-hour display 1: 24-hour display
003	REMAIN SEL	0000 0001	OFF ON	This selects whether to indicate the remaining tape time (REMAIN) on the front panel display and the superimposed display at the VIDEO OUT 3/SERIAL OUT 3 connectors. 0: Remaining tape time is not displayed. 1: Remaining tape time is displayed. <Notes> • The remaining tape time is indicated at the far right of the second digit on the front panel display and superimposed display. • Even when 1 (ON) has been selected, the remaining tape time is not displayed while it is being calculated after the cassette has been ejected or inserted. • When TIME has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the time is not indicated on the superimposed display. • No display appears if the freeze mark (F) is indicated by the setup menu item No. 111 (FRZ MODE SEL) setting. • No display appears if the tape start or end is sensed and BOT or EOT is displayed.
004	SETUP NUMBER	0000 0001	OFF ON	This selects whether the SETUP MENU No. is to be displayed on the front panel. 0: The SETUP MENU No. is not displayed. 1: The SETUP MENU No. is displayed.
007	SUPER	0000 0001	OFF ON	This selects whether the time code and other superimposed displays are to be shown at the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Superimposed displays are not shown. 1: Superimposed displays are shown.

"_" denotes the factory setting.

Setup menus

USER menus

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
008	DISPLAY SEL	0000 0001 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This selects what information is to be provided by the time code and other superimposed displays at the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Time only 1: Time and operating mode 2: Time, operating mode and mode 3: Time and REC TIME 4: Time and REC DATE (year/month/day) 5: Time and REC DATE (month/day/year) 6: Time and REC DATE (day/month/year) <Notes> 1. Displayed as the mode is DVCPRO_50 for the DVCPRO50 (50 Mbps) format, DVCPRO for the DVCPRO (25 Mbps) format or DV for the DV format. 2. An error message appears if a warning or error has occurred when 2 (T&S&M) has been selected as this setting. 3. REC TIME and REC DATE are displayed during DV playback only. With the DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) format, the operating mode is displayed.
009	CHARA H-POS	0000 ... 0004 ... 0015	0 ... 4 ... 15	This sets the horizontal position of the characters for the time code and other superimposed displays of the VIDEO OUT 3/SERIAL OUT 3 connector. <Notes> When this item is set, the time code and other superimposed displays are output to VIDEO OUT 3/SERIAL OUT 3 in the DISPLAY SEL status even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Furthermore, CHARA TYPE as set in the menu is output to VIDEO OUT 3.
010	CHARA V-POS	525 mode 0000 ... 0018 ... 0022 625 mode 0000 ... 0023 ... 0028	0 ... 18 ... 22 0 ... 23 ... 28	This sets the vertical position of the characters for the time code and other superimposed displays of the VIDEO OUT 3/SERIAL OUT 3 connector. <Notes> 1. When this item is set, the time code and other superimposed displays are output to VIDEO OUT 3/SERIAL OUT 3 in the DISPLAY SEL status even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting is changed in such a way that the characters are automatically displayed at a position where they are contained within the screen.

"_" denotes the factory setting.

USER menus

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
011	CHARA TYPE	0000 0001	WHITE W/OUT	This selects the display type for the superimposed displays of the VIDEO OUT 3/SERIAL OUT 3 connector, the setup menus, etc. 0: White characters against a black background 1: White characters with a black border
012	SYS FORMAT	0000 0001	50M 25M	This sets the playback format. 0: The DVCPRO50 (50 Mbps) format is selected. 1: The DVCPRO (25 Mbps) format is selected.
013	PB FORMAT	0000 0001	MANUAL AUTO	This sets the tape playback format. 0: The format complies with the setup menu item No. 012 (SYS FORMAT) setting. 1: The format complies with the format recorded on the tape when the DVCPRO mode has been selected as the setup menu item No. 014 (FORMAT SEL) setting. <Note> There is no automatic setting in the 525/625 mode.
014	FORMAT SEL	0000 0001	DVCPRO DV	This selects the format when an L size cassette is used. 0: DVCPRO (50 Mbps, 25 Mbps) mode 1: DV mode <Notes> Bear in mind that the following problems may arise over and above trouble with playback if a tape with a different format from the one selected is inserted. 1. The remaining tape time will not be displayed accurately. 2. The slow-down positions near the tape start and end will not be located accurately. 3. In addition, no guarantees are given for performance, etc. if a tape with a different format from the one selected is inserted.
016	CU-ROLL TIME	0000 : 0015	0s : 15s	This sets the time for the preroll which is initiated by the CUE UP button. It can be set from 0 to 15 seconds in 1-second increments.

"_" denotes the factory setting.

Setup menus

USER menus

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	0000 0001	DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 0001 0002	×8.4 ×16 ×32	This sets the maximum speed for shuttle operations. 0: 8.4× (7.0×) normal speed 1: 16× normal speed 2: 32× normal speed <Note> The values for the DV format are shown in parentheses.
102	FF. REW MAX	0000 0001 0002	×16 ×32 ×50	This sets the maximum speed for FF and REW operations. 0: 16× (32×) normal speed 1: 32× (60×) normal speed 2: 50× (100×) normal speed <Notes> • The values for the DVCPRO (25 Mbps) format are shown in parentheses. • With the DV format, the maximum speed is set to 32× regardless of this item's settings.
103	AUDIO MUTE	0000 0001	OFF ON	This sets the status that is established until the audio signals are output when operation is transferred from the STOP or search mode to PLAY. 0: The time until the sound is output is shortened. 1: The sound is output only after the status transfer is completed. <Note> When this item is set to 0, the sound in the part which is output at the beginning will be imperfect. Therefore, this setting is not recommended for use with broadcasts.
104	REF ALARM	0000 0001	OFF ON	This selects whether to display a warning for the operator when the REF.VIDEO signal has not been connected. 0: A warning is not displayed. 1: A warning is displayed in the form of a flashing STOP lamp.
107	PLAY DELAY	0000 : 0015	0 : 15	This sets the play startup time in frame increments.
108	CAP. LOCK	0000 0001	4F 8F	This selects the CAPSTAN LOCK mode when the CF switch has been set to 4F or 8F. 0: 4F mode 1: 8F mode <Note> This setup menu item is not displayed in the 525 mode.
109	AUTO REW	0000 0001	OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end has been detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.

"_" denotes the factory setting.

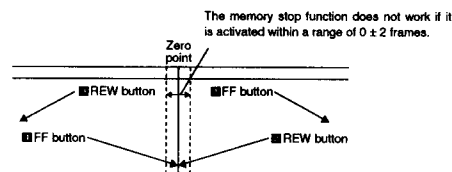
USER menus

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
110	MEMORY STOP	0000 0001	OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during fast forwarding or rewinding in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. <Notes> 1. The stop mode concerned is either the stop or still-picture (SHTL STILL) mode depending on the setup menu item No. 315 (AFTER CUE-UP) setting. 2. When the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.
111	FRZ MODE SEL	0000 0001 0002	DIS STBOFF SOF&EJ	This selects the image which is to be output in the STANDBY OFF (HALF LOADING) mode and EJECT mode. 0: The video output is muted. 1: In the STANDBY OFF (HALF LOADING) mode only, the playback picture corresponding to the point in time when the STANDBY OFF mode was established is frozen and output. 2: In the STANDBY OFF (HALF LOADING) and EJECT mode, the playback picture corresponding to the point in time when the mode was established is frozen and output. <Note> The mode of field freeze is used when the playback picture is frozen.

" " denotes the factory setting.

Description of memory stop function



- When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.
- When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp also lights), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."
- When the REW button is pressed, the VTR performs the regular rewind operation since the zero point is not located in the direction of operation.
- When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp also lights), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

Setup menus

USER menus

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	0000 0001	DIS ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: The VTRs are not operated in synchronization. 1: The VTRs are operated in synchronization. <Note> When the VTRs are to be operated in synchronization, set item 200 to "1" for all the VTRs.
201	9P SEL	0000 0001	OFF ON	This selects whether the 9P connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The 9P connector does not function. 1: The 9P connector functions.
202	ID SEL	0000 0001	OTHER DVCPRO	This selects the ID information which is returned to the controller. 0: 20 25H in the 525 mode; 21 25H in the 625 mode 1: ID inherent to DVCPRO F0 33H in the 525 mode; F1 33H in the 625 mode
203	25P SEL	0000 0001	OFF ON	This selects whether the PARALLEL (25P) connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The 25P connector does not function. 1: The 25P connector functions.
204	RS232C SEL	0000 0001	OFF ON	This selects whether the RS-232C connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The RS-232C connector does not function. 1: The RS-232C connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 0005	300 600 1200 2400 4800 9600	This sets the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 0001	7 8	This sets the RS-232C data length (unit: bit).
207	STOP BIT	0000 0001	1 2	This sets the RS-232C stop bit length (unit: bit).
208	PARITY	0000 0001 0002	NON ODD EVEN	This sets none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. (None) 1: An odd number of bits is used for the parity. (Odd) 2: An even number of bits is used for the parity. (Even)
209	RETURN ACK	0000 0001	OFF ON	For selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	0000 0001	OFF/ON ON	This selects the method used in connection with detecting the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time an active signal is detected, the mode is switched from STANDBY ON to STANDBY OFF or vice versa. 1: When an active signal is detected in the STANDBY OFF mode, operation is transferred to the STANDBY ON mode. This setting has no effect on operation while the unit is in the STANDBY ON mode.

" " denotes the factory setting.

USER menus

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
315	AFTER CUE-UP	0000 0001	STOP STILL	This selects the unit's mode upon completion of the cue-up operation. 0: The unit is set to the stop mode. 1: The unit is set to the still-picture (SHTL STILL) mode.
319	VAR STEP	0000 0001	FINE COARSE	This selects the VAR speed above $\pm 1\times$ for remote control operations. 0: The tape is played at a speed which can be varied in fine steps. 1: The tape is played at a speed which can be varied in coarse steps. <Note> Phase synchronization from the editing controller is not possible at the "1" (COARSE) setting.
320	VAR FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum VAR FWD speed. 0: DVCPRO50 (50 Mbps) = +4.1 \times normal speed DVCPRO (25 Mbps) = +4.1 \times normal speed DV = +3.1 \times normal speed 1: DVCPRO50 (50 Mbps) = +1.85 \times normal speed DVCPRO (25 Mbps) = +2 \times normal speed DV = +1.85 \times normal speed 2: +1 \times normal speed <Note> Phase synchronization from the editing controller is not possible at a setting other than "0" (+4.1).
321	VAR REV MAX	0000 0001 0002	-4.1 -1.85 -1	This sets the maximum VAR REV speed. 0: DVCPRO50 (50 Mbps) = -4.1 \times normal speed DVCPRO (25 Mbps) = -4.1 \times normal speed DV = -3.1 \times normal speed 1: DVCPRO50 (50 Mbps) = -1.85 \times normal speed DVCPRO (25 Mbps) = -2 \times normal speed DV = -1.85 \times normal speed 2: -1 \times normal speed <Note> Phase synchronization from the editing controller is not possible at a setting other than "0" (-4.1).
322	JOG STEP	0000 0001	FINE COARSE	This selects the JOG speed during remote control operations. 0: The tape is played at a speed which can be varied in fine steps. 1: The tape is played at a speed which can be varied in coarse steps. <Note> Phase synchronization from the editing controller, which synchronizes the phase using the JOG command, is not possible at the "1" (COARSE) setting.
323	JOG FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum JOG FWD speed. 0: DVCPRO50 (50 Mbps) = +4.1 \times normal speed DVCPRO (25 Mbps) = +4.1 \times normal speed DV = +3.1 \times normal speed 1: DVCPRO50 (50 Mbps) = +1.85 \times normal speed DVCPRO (25 Mbps) = +2 \times normal speed DV = +1.85 \times normal speed 2: +1 \times normal speed <Notes> • When the dial is operated on the front panel, the maximum playback speed is +1 \times normal speed for the DVCPRO50 (50 Mbps) and DV formats. With the DVCPRO (25 Mbps) format, it is +2 \times normal speed at "0" or "1" and +1 \times normal speed at "2" depending on the menu setting. • Phase synchronization from the editing controller, which synchronizes the phase using the JOG command, is not possible at a setting other than "0" (+4.1).

"_" denotes the factory setting.

Setup menus

USER menus

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
324	JOG REV MAX	0000 0001 0002	-4.1 -1.85 -1	This sets the maximum JOG REV speed. 0: DVCPRO50 (50 Mbps) = -4.1 \times normal speed DVCPRO (25 Mbps) = -4.1 \times normal speed DV = -3.1 \times normal speed 1: DVCPRO50 (50 Mbps) = -1.85 \times normal speed DVCPRO (25 Mbps) = -2 \times normal speed DV = -1.85 \times normal speed 2: -1 \times normal speed <Notes> • When the dial is operated on the front panel, the maximum speed is -1 \times normal speed for the DVCPRO50 (50 Mbps) and DV formats. With the DVCPRO (25 Mbps) format, it is -2 \times normal speed at "0" or "1" and -1 \times normal speed at "2" depending on the menu setting. • Phase synchronization from the editing controller which synchronizes the phase using the JOG command is not possible when a setting other than 0 (-4.1) is used.

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 0008	0.5s 5s 10s 20s 30s 40s 50s 1min 2min	This selects the time taken until the tape protection mode is established when the unit has been left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) <Note> When a DV tape for general consumer applications is used, any setting above 10 seconds will be treated as 10 seconds. However, the selection screen will show operations up to 2 minutes.
401	SRC PROTECT	0000 0001	STEP HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the search STILL (JOG/VAR/SHTL) mode, the unit automatically enters a tape protection mode. This menu item is for selecting which tape protection mode is to be entered by the unit. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD has been selected, the STANDBY OFF (HALF LOADING) mode will automatically be established when the total time during which the unit has been left standing in the still status has reached 30 minutes (or 1 minute for a DV tape).
402	DRUM STDBY	0000 0001	OFF ON	This selects whether the head drum is to be rotated when operation is transferred to the STANDBY OFF (HALF LOADING) mode. 0: The head drum is stopped. 1: The head drum is rotated.
403	STOP PROTECT	0000 0001	STEP HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the STOP mode, the unit automatically enters a tape protection mode. This menu item is for selecting which tape protection mode is to be entered by the unit. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD has been selected, the STANDBY OFF (HALF LOADING) mode will automatically be established when the total time during which the unit has been left standing in the stop status has reached 30 minutes (or 1 minute for a DV tape).

<Precaution for STILL TIMER setting>
The cumulative standby time at the same position increases when programs are transmitted or at other times when the same material is used repeatedly, etc.

"_" denotes the factory setting. - 44 -

USER menus

<TIME CODE>

Item		Setting		Description	
No.	Superimposed display	No.	Superimposed display		
500	VITC BLANK	0000 0001	BLANK THRU	This selects whether to output the VITC data to the positions selected by VITC POS-1 in 501 and VITC POS-2 in 502. 0: The data is not output. 1: The data is output.	
501	VITC POS-1	525 mode		This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-2 in 502 cannot be selected.)	
		0000	10L		
		0006	16L		
		0010	20L		
		625 mode			
		0000	7L		
502	VITC POS-2	525 mode		This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-1 in 501 cannot be selected.)	
		0000	10L		
		0006	16L		
		0010	20L		
		625 mode			
		0000	7L		
507	PHASE CORR	0000		This selects whether to control the phase correction of the LTC output during playback. 0: Phase correction control is not performed. 1: Phase correction control is performed.	
		0001			OFF ON
509	DF MODE	0000		This selects the DF or NDF mode for CTL. 0: Drop frame mode 1: Non-drop frame mode <Notes> • This item is valid when the unit is in the LOCAL mode or when "ENA" is selected as the menu setup item No. 004 (LOCAL ENA). • This setup menu item is not displayed in the 625 mode.	
		0001			DF NDF
511	VITC OUT	0000 0001	SBC VAUX	This selects the method of outputting VITC which is superimposed onto the video output signals. SBC: The time code recorded in the SBC area is output as the VITC. VAUX: The time code recorded in the VAUX area is output as the VITC.	

"_" denotes the factory setting.

SBC (Sub Code Data) area

This area is separate from the video and audio data area on the helical track. It is used to store the time codes complying with the SMPTE/EBU standard. As with the conventional linear time code (LTC), the time code can be read even during rewinding or fast forwarding. It can also be read when the tape has stopped.

VAUX (Video Auxiliary Data) area

This area is located in the video data area on the helical track. It is used to store the auxiliary data relating to the video data.

<Notes>

Control over the time code and user bit during tape play is exercised using the data recorded in the SBC area. In other words, data recorded in the SBC area is used as the source of the data which is displayed or superimposed or the data which is sent to the editing controller.

Setup menus

USER menus

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
602	V-MUTE SEL	0000 0001	N-MUTE LOW RE	This selects whether the video output signal is to be muted when a blank part of the tape has been detected during playback. 0: The video signal is not muted (it is frozen). 1: The video signal is muted (it is turned to gray).
603	CC (F1) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed caption signal in the first field. 0: The signal is forcibly blanked. 1: The signal is not forcibly blanked. <Note> This setup menu item is not displayed in the 625 mode.
604	CC (F2) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed caption signal in the second field. 0: The signal is forcibly blanked. 1: The signal is not forcibly blanked. <Note> This setup menu item is not displayed in the 625 mode.
605	FREEZE SEL	0000 0001	FIELD FRAME	This selects the freeze mode for still pictures. 0: Field freeze 1: Frame freeze <Note> When frame freeze has been selected, the frame slow status is established in the slow-motion mode.
606	OUT C KILL	0000 0001	B/W COLOR	This selects the chroma color killer processing for the video output signals. 0: The signals are forcibly processed as black-and-white signals. 1: The signals are automatically processed.
609	EDH	0000 0001	OFF ON	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed.
614	Pb/Pr OUT LV	0000 0001	MII B-CAM	This selects the analog component output level. 0: MII level 1: Betacam level <Note> This setup menu item is not displayed in the 625 mode.
618	INTER- POLATE	0000 0001	OFF AUTO	During slow-motion playback, vertical interpolation is performed automatically to reduce the up and down movement of the playback picture. However, this setting can be used to forcibly turn off this interpolation. 0: The interpolation is forcibly turned off. 1: The interpolation is automatically turned on during slow-motion playback.
620	ESR MODE	0000 0001	OFF AUTO	This selects the operation mode of the edge subcarrier reduction (ESR) in the playback circuit. 0: ESR is forcibly turned off. 1: ESR is automatically turned on or off depending on the VTR operation.
621	CCR MODE	0000 0001	OFF ON	This selects the cross-color processing during playback. 0: The signals which are output remain unchanged. 1: Cross-color can be reduced. <Note> This setup menu item is not displayed in the 625 mode.

"_" denotes the factory setting.

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
622	SETUP 25			This selects the set-up level for the output signals in the DVCPRO (25 Mbps) mode. When the STOP button is pressed, operation transfers to the sub-screen, and the setup level is set for the outputs. Press the STOP button again to return from the sub-screen. <Note> This setup menu does not appear in the 625 mode.
Sub-screen				
01	CMPST OUT	.0000 0001	THRU ADD	This selects the composite output signal. 0: The composite signal is output without the setup added. 1: The composite signal is output with a setup of 7.5% added. <Note> Bear in mind the setting for sub-screen No.03 (CMPNT OUT) of set-up menu item No. 622 (SETUP 25).
03	CMPNT OUT	.0000 0001	THRU CUT	This selects how the composite, component and serial (digital) signals are to be output. 0: The signals are output as they are. 1: The signals are output with the 7.5% setup removed.
623	SETUP 50			This selects the set-up level for the output signals in the DVCPRO (50 Mbps) mode. When the STOP button is pressed, operation transfers to the sub-screen, and the setup level is set for the outputs. Press the STOP button again to return from the sub-screen. <Note> This set-up menu does not appear in the 625 mode.
Sub-screen				
01	CMPST OUT	.0000 0001	THRU ADD	This selects the composite output signal. 0: The composite signal is output without the setup added. 1: The composite signal is output with a setup of 7.5% added. <Note> Bear in mind the setting for sub-screen No. 03 (CMPNT OUT) of setup menu item No. 623 (SETUP 50).
03	CMPNT OUT	.0000 0001	THRU CUT	This selects how the composite, component and serial (digital) signals are to be output. 0: The signals are output as they are. 1: The signals are output with the 7.5% setup removed.

"_" denotes the factory setting.

Setup menus

USER menus

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
706	CH1 OUT LV	0000 .0001 0002	4dB 0dB -20dB	This selects the audio output (CH1) reference level switching.
707	CH2 OUT LV	0000 .0001 0002	4dB 0dB -20dB	This selects the audio output (CH2) reference level switching.
708	CH3 OUT LV	0000 .0001 0002	4dB 0dB -20 dB	This selects the audio output (CH3) reference level switching.
709	CH4 OUT LV	0000 .0001 0002	4dB 0dB -20 dB	This selects the audio output (CH4) reference level switching.
710	CUE OUT LV	0000 .0001 0002	4dB 0dB -20dB	This selects the cue output reference level switching.
711	MONIL OUT LV	0000 .0001 0002	4dB 0dB -20dB	This selects the audio monitor output (Lch) reference level switching.
712	MONIR OUT LV	0000 .0001 0002	4dB 0dB -20dB	This selects the audio monitor output (Rch) reference level switching.
713	MONI OUT	0000 .0001	UNITY VAR	This selects the audio monitor output UNITY/VARIABLE reference level switching. 0: The volume is output in the form of the preset value. 1: The volume is linked with the headphones volume control.
721	MONI CH SEL	0000 .0001 0002	MANU AUTO1 AUTO2	This selects the monitor output. 0: The signals selected by the MONITOR SELECT switches are output. 1: PCM audio signals are output over a -1 to +1 (-2 to +2) range; otherwise, the cue signals are automatically output. 2: PCM audio signals are output in the play mode; otherwise, the cue signals are automatically output. <Notes> • This menu item setting is valid when the L and R MONITOR SELECT switches on the front panel are set to CH1, CH2, CH3 or CH4. (If CUE is selected, the cue signal will be output at all speeds regardless of the menu item setting.) • The speed applying for the DVCPRO (25 Mbps) format is given inside the parentheses.
727	PB FADE	.0000 0001 0002	AUTO CUT FADE	This selects the processing method for the audio edit points (IN and OUT points) during playback. 0: The processing complies with the status established during recording. 1: Forced CUT 2: Forced FADE
728	EMBEDDED AUD	.0000 0001	OFF ON	This selects whether to superimpose the audio data onto the serial output. 0: The data is not superimposed. 1: The data is superimposed.

"_" denotes the factory setting.

USER menus

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
729	MONITOR MIX L	0000 0001 0002	___OFF CH1+2 CH3+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing 1: The CH1 and CH2 signals are mixed and output to the left channel. 2: The CH3 and CH4 signals are mixed and output to the left channel.
730	MONITOR MIX R	0000 0001 0002	___OFF CH1+2 CH3+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing 1: The CH1 and CH2 signals are mixed and output to the right channel. 2: The CH3 and CH4 signals are mixed and output to the right channel.
731	CUE OUT SEL	0000 0001	___OFF ON	This selects whether the cue signal is to be output to the main line output in the search mode. 0: The cue signal is not output. 1: The cue signal is output. (However, this applies only when setup menu item No. 721 (MONI CH SEL) is not set to MANU.)
732	CUE SLOW	0000 0001	___STEP LINEAR	This selects the tape travel status (cue track playback status) during the slow-motion playback. 0: The output picture takes precedence, and the tape is advanced in steps. 1: Cue track playback takes precedence and the tape travels linearly. <Notes> When "1" (LINEAR) has been selected: • The image may not appear as clearly as in the STEP mode. • The CTL counter may not operate normally.
734	MONI SEL INH	0000 0001 0002	___OFF ON ON1	This enables or disables the operation of the MONITOR SELECT switches on the front panel. 0: Operation is enabled. 1: Operation is disabled. 2: Operation is disabled in the FULL display mode; it is enabled in the FINE display mode only.
750	DV PB ATT	0000 0001	OFF ___ON	This selects the audio output level during DV playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced).
751	REC PT MUTE	0000 0001	___OFF ON	This selects whether to mute the sound where recordings are joined during DV playback. 0: The sound is not muted. 1: The sound is muted.

"___" denotes the factory setting.

Setup menus

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
804	BLANK LINE	0000 0001 0002	___BLANK THRU MANU	This sets the blanking to ON or OFF for the lines in the vertical blanking period of the video output signals. 0: All the lines are forcibly blanked. 1: None of the lines are blanked. 2: Blanking is set ON or OFF for each line. <Note> When "2" (MANU) is selected, operation transfers to the sub screen when the STOP button is pressed, and ON or OFF can be selected for each line. To return from the sub screen, press the STOP button again.
Sub-screen				
525 mode				
00	LINE 10&273	0000 0001	___BLANK THRU	0: The line is forcibly blanked. 1: The line is blanked.
:	:			
11	21&284			
625 mode				
00	LINE 7&320	0000 0001	___BLANK THRU	0: The line is forcibly blanked. 1: The line is blanked.
:	:			
15	22&335			

"___" denotes the factory setting.

USER menu

<MENU>				
Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	.0000 0001 0002 0003	— USER2 USER3 USER4 USER5	This selects the user file whose settings are to be loaded into USER1. 0: The contents of the USER2 file are loaded. 1: The contents of the USER3 file are loaded. 2: The contents of the USER4 file are loaded. 3: The contents of the USER5 file are loaded. <Note> When the SET button is pressed upon completion of the loading, the settings in the file are stored in the memory. If the MENU is pressed instead, the settings will not be changed.
A01	SAVE	.0000 0001 0002 0003 0004	— USER2 USER3 USER4 USER5 LOCKED	This selects the user file in which the USER1 settings are to be saved. 0: The USER1 settings are to be saved in the USER2 file. 1: The USER1 settings are to be saved in the USER3 file. 2: The USER1 settings are to be saved in the USER4 file. 3: The USER1 settings are to be saved in the USER5 file. 4: The "LOCKED" display appears when the change prohibit status has been established for all the files. <Notes> • A user file for which change prohibit is set cannot be selected. • When the change prohibit status has been established for all the files, the "LOCKED" display appears, and the saving operation cannot be performed.
A02	P.ON LOAD	.0000 0001 0002 0003 0004	— OFF USER2 USER3 USER4 USER5	This selects the user file whose settings are to be loaded into USER1 when the power is turned on so that the unit will start up with these settings. 0: The unit is started up with the settings in the user file which was previously set. 1: The settings of USER2 are loaded in USER1 and the unit starts with these settings. 2: The settings of USER3 are loaded in USER1 and the unit starts with these settings. 3: The settings of USER4 are loaded in USER1 and the unit starts with these settings. 4: The settings of USER5 are loaded in USER1 and the unit starts with these settings.
A03	MENU LOCK	.0000 0001	— OFF ON	This selects whether the lock mode is to be set or released for the user files (USER2 to USER5). 0: The lock is released (changes to the files can be made). 1: The lock is set (no changes to the files can be made). <Note> The lock cannot be set for USER1.

"—" denotes the factory setting.

<Notes>

- Menu items No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) can be set for the USER1 file only. They will not appear for the USER2 to USER5 files.
- Menu item No. A03 (MENU LOCK) can be set for the USER2 to USER5 files only. It will not appear for the USER1 files.

Time Code/User Bit

Time code

The time codes are used when their values are to be read by the time code reader (time code signal reader) and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time codes are written in the sub-code area (data area) of the helical track. They enable the VTR's playback speed to be read from the stop mode to slow-motion playback up to high-speed speed play (approx. 50x normal speed or approx. 100x when a DVCPRO tape is used).

The time code values are shown on the display or superimposed.

TCR 00 : 07 : 04 : 24
 ↑ ↑ ↑ ↑
 Hours Minutes Seconds Frames

User bit

The "user bit" refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users.

Time Code/User Bit Playback

- 1 Set the unit to the stop mode.
- 2 Set the TC/CTL button to TC.
- 3 Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
 • When it is no longer possible to read the time code, it is interpolated using the CTL signal.
- 4 Press the PLAY button.
 Playback now commences, and the time code appears on the display.
 When "ON" has been selected as the setup menu item No. 007 (SUPER), the time code value is superimposed onto the video signal from the VIDEO OUT 3 connector.

<Notes>

- The colon between the seconds and frames changes to a period when the drop frame time code is read.
- When the time code signal is missing, it is automatically compensated for using the CTL signal. In this case, the following display appears.

T * R 00:01:04:07

The colon between the seconds and frames changes to a period in the drop frame mode.

When the time code signal is missing, an asterisk (*) appears here.

Superimpose Screen

The control signals, time code, etc. are displayed using abbreviations.

Abbreviation
 ↓
 TCR **: **: **: *

TV monitor

CTL = control signal
 TCR = TC time code reading
 UBR = TC user bit reading

Characters displayed

The background of the characters superimposed on the display can be changed using setup menu item No. 011 (CHARA TYPE).

TCR **: **: **: *

TV monitor

Display position

The position of the characters superimposed on the display can be changed using setup menu items No. 009 (CHARA H-POS) and No. 010 (CHARA V-POS).

TCR **: **: **: *

TV monitor

TCR **: **: **: *

TV monitor

Operation mode

The VTR's operation mode can also be displayed using setup menu item No. 008 (DISPLAY SEL).

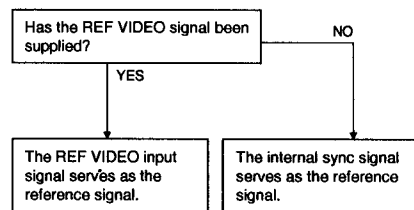
TCR **: **: **: *
 STOP ←

TV monitor

VTR's operation mode

Servo Reference

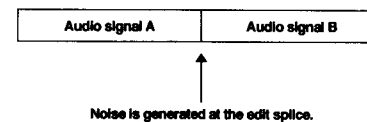
This unit automatically selects the reference video signal which is supplied from the REF VIDEO input connector or the internal sync signal (INT) as the servo reference signal. When the signal is selected, the unit's mode and servo reference setting stand in the relationship shown in the flowchart presented below.



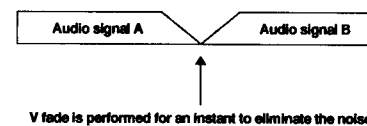
Audio V Fade Function

When a tape is edited, the information on the edit point splicing method selected is recorded on the tape. This information is therefore sensed when the tape is inserted and played back, and V fade or cut processing is automatically performed for these sections [but only when "AUTO" has been set as the playback fade selection (setup menu item No. 727)].

When "CUT" is set as the edit point splicing method



When "FADE" is set as the edit point splicing method



<Notes>

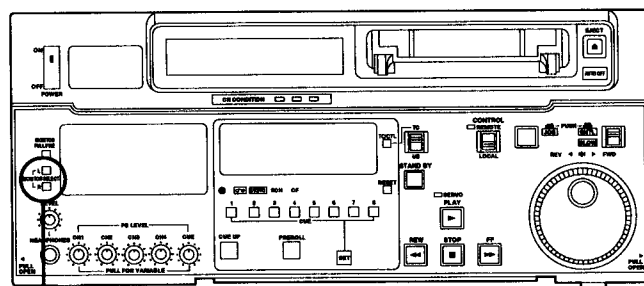
- When "CUT" is set as the edit point splicing method (setup menu item No. 727), cut processing is performed for all the splices.
- When "FADE" is set as the edit point splicing method (setup menu item No. 727), V fade processing is performed for all the splices.

Selecting the Audio Monitor Output

Monitor output channels

The monitor output channels can be selected using the MONITOR SELECT switches as shown below.

Monitor output	Output signals
L	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CUE
R	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CUE

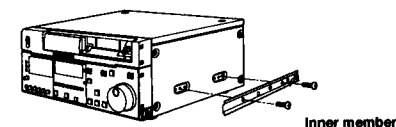


MONITOR SELECT switches

Rack Mounting

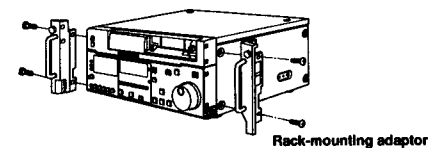
The unit can be mounted into a 19-inch standard rack if the AJ-MA75P rack-mounting adapters (optional accessory) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3061-99-0400) of CHASSIS TRAK be used. (The complete slide rail and bracket unit is not available from Panasonic.) For further details, consult with your dealer.

- 1 Remove the screws on the left and right sides of the unit.
- 2 Use the screws which have just been removed to attach the inner members of the slide rails.

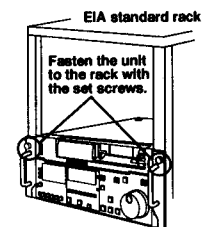


The length of the screws used is subject to restriction. If some of the mounting screws have been lost or misplaced, use screws which are less than 2/5" long in their place. Four screws must be used to secure each inner member.

- 3 Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.
- 4 Attach the AJ-MA75P rack-mounting adapters with the four screws supplied.



- 5 Remove the four rubber feet from the bottom of the unit, and install the unit in the rack. After the unit has been installed, check that it moves smoothly along the rails.



<Notes>

- Keep the temperature inside the rack to between 41°F and 104°F (5°C and 40°C).
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video Head Cleaning

This unit has an auto head cleaning function which automatically reduces the dirt on the heads. However, to further increase the unit's reliability, it is recommended that its video heads be cleaned every day.

Use the cleaning fluid designated by Panasonic.

Condensation

Condensation forms due to the same principle involved when droplets of water form on a window pane of a heated room. This phenomenon occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from an air-conditioned location to a hot or humid location.

When moving the unit or tape to locations such as these, leave it standing for about 10 minutes instead of switching on the power immediately.

If condensation has formed on or in the unit, the AUTO OFF lamp lights, and the cassette tape is automatically ejected.

Keep the power supplied and wait until the AUTO OFF lamp goes off.

■ Maintenance

Before proceeding with maintenance, be absolutely sure to set the power switch to OFF and take hold of the power plug and unplug it from the power outlet.

Use a soft cloth to clean the cabinet. In the case of stubborn dirt, dilute some kitchen detergent, soak a cloth in the solution, wring it out well, and wipe the surfaces clean. Then wipe up the remaining moisture using a dry cloth.

Error Messages

When a warning occurs in this unit, the warning lamp lights up.

Open the DIAG menu. A description of the warning will now appear on the counter display and TV monitor. In addition, if trouble has occurred in the operation of the unit, the AUTO OFF lamp lights, and a message appears on the counter display.

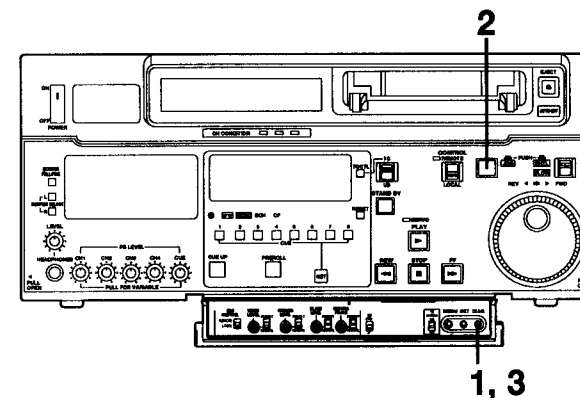
DIAG menu

This displays the VTR information.

The VTR information includes the warning information, the deck's serial number, and hour meter (usage time) information. The DIAG menu appears on the TV monitor when the TV monitor has been connected to the VIDEO OUT 3 connector on the connector panel.

Displaying the DIAG menu

- 1** Press the DIAG button.
The DIAG menu screen appears on the TV monitor, and a message appears on the counter display.
- 2** Each time the search button is pressed, the display is switched to the warning information, the deck's serial number and hour meter information in this order.
- 3** Press the DIAG button to return to the original display.



Warning Information display

- A warning message appears whenever a warning occurs (the warning lamp lights). When a warning has not occurred, "NO WARNING" is displayed.
- When more than one warning has occurred, a description of each warning can be checked by turning the search dial.

Displaying the hour meter information

Turn the search dial to move the cursor (*), and a description of the item where the cursor is located will appear on the counter display.

Item No.	Item	Description
Ser	*****	This displays the deck's serial number.
H00	OPERATION	This displays the number of hours during which the power has been supplied in 1-hour units.
H01	DRUM RUN	This displays the number of hours during which the drum has been rotating in 1-hour units.
H02	TAPE RUN	This displays the number of hours during which the tape has traveled in the FF, REW, PLAY and SEARCH (JOG, VAR, SHTL) modes in 1-hour units.
H03	THREADING	This displays the number of times the tape has been threaded and unthreaded in 1-time units.
H11	DRUM RUN r	This displays the number of hours during which the drum has been rotating in 1-hour units. (The display can be reset.)
H12	TAPE RUN r	This displays the number of hours during which the tape has traveled in the FF, REW, PLAY and SEARCH (JOG, VAR, SHTL) modes in 1-hour units. (The display can be reset.)
H13	THREADING r	This displays the number of times the tape has been threaded and unthreaded in 1-time units. (The display can be reset.)
H30	POWER ON	This displays the number of times the power has been turned on in 1-time units.

<Notes>

- The hour meter information items which can be reset are reset by the dealer when maintenance work, etc. has been performed.
- Operations involving the search button and search dial cannot be performed while the DIAG menu is displayed.

If "T&S&M" has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the message will appear on the mode display area when a warning or error has occurred. When two or more warnings or errors have occurred, they are displayed in sequence of priority starting with the one which has the highest priority.

Priority	Display	Description
High ↑	Error messages (see error message table)	When trouble has occurred in the operation of the unit, the AUTO OFF lamp lights, and an error message is displayed.
	ILLEGAL REF	When illegal signals, which are not black burst or other composite signals complying with the broadcast standards (525: RS-170A, 625: CCIR624), have been supplied to the REF VIDEO input connector, the message shown on the left may appear depending on the signal concerned. Since, in a case like this, it cannot be guaranteed that the VTR will operate properly, eject the cassette and turn off the power. Check the REF VIDEO signals before turning the power back on. <Note> The tape will not be damaged even when this message appears.
Low ↓	Warning messages (see error message table)	When a warning occurs, the warning lamp lights, and a warning message is displayed. When two or more warnings have occurred, they are displayed in sequence of priority starting with the one which has the highest priority.

Warning messages

Priority	On counter display and TV monitor	Description	VTR operation
High ↑	FAN STOP	This appears when the fan motor has stopped.	The VTR continues operating.
	NO RF	This appears when a blank portion of the tape lasting more than 1 second has been detected during playback. Any portion of the tape is recognized as a blank when all the following conditions are satisfied: • When no signals are output from any of the heads. • When no playback data can be read. • When there is no CTL signal (this does not apply with DV tapes for general consumer applications).	The VTR continues operating.
	SERVO NOT LOCKED	This appears when the servo is not locked for 3 or more seconds during playback.	The VTR continues operating.
	LOW RF	This appears when it has been detected that the envelope level has dropped to approximately one-third of its usual level during playback.	The VTR continues operating.
Low ↓	HIGH ERROR RATE	This appears when the error rate increases, and correction or interpolation is performed for either the video or audio playback signals.	The VTR continues operating.

Error Messages (when AUTO OFF lamp lights)

On counter display	On TV monitor	Description	VTR operation (restart action)
CAP ROTATE TOO SLOW	CAP ROTA TOO SLOW	When the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
CAP TENSION ERROR	CAP TENSION ERROR	When abnormal tension is detected at the supply side in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
DEW	DEW	When condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to dry out the condensation. When the condensation has dried out, the AUTO OFF lamp goes off, the message display is cleared, and the VTR can be operated again. • When condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. • When condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	Eject
DRUM ROTATE TOO FAST	DRUM ROTA TOO FAST	When the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
DRUM ROTATE TOO SLOW	DRUM ROTA TOO SLOW	When the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
E-FF	E-FF	When the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
FRONT LOAD ERROR	FRONT LOAD ERROR	When the take-up reel has been rotating without taking up the tape for a specific period of time while the start or end processing operation during loading (half position) is being performed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
FRONT LOAD MOTOR	FRONT LOAD MOTOR	When the cassette fails to move up even when 6 seconds have elapsed after the eject mode was established, the AUTO OFF lamp lights, and the message display flashes. <Note> When the cassette fails to move down even when 6 seconds have elapsed after the cassette was inserted, the eject mode is established.	Stop (power OFF→ON)
LOADING MOTOR	LOADING MOTOR	When the unloading operation fails to be completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. <Note> When the loading operations fails to be completed within 6 seconds, the eject mode (unloading mode) is established.	Stop (power OFF→ON)
REEL DIR UNMATCH	REEL DIR UNMATCH	When the take-up reel motor is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)

On counter display	On TV monitor	Description	VTR operation (restart action)
REEL TENSION ERROR	REEL TENSION ERROR	When abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
SERVO COMM ERROR	SERVO COMM ERROR	When the servo microcomputer does not follow the instructions of the system control microcomputer even after 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
SERVO CONTROL ERROR	SERVO CONTROL ERR	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
SERVO ERROR	SERVO ERROR	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
S-FF/REW TIMEOVER	S-FF/REW TIMEOVER	When the start or end processing operation fails to be completed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
S REEL ROTA TOO FAST	S REEL TOO FAST	When the supply reel motor rotates at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
S REEL TORQUE ERROR	S REEL TORQUE ERR	When an abnormal torque applied to the supply reel motor is detected or an abnormal current flowing to the current-sensing resistor is detected, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
T REEL ROTA TOO FAST	T REEL TOO FAST	When the take-up reel motor rotates at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
T REEL TORQUE ERROR	T REEL TORQUE ERR	When an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
UNLOAD ERROR	UNLOAD ERROR	When the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
WINDUP ERROR	WINDUP ERROR	If, after the total tape amount has been detected, the amount of tape wound up on the take-up reel and the amount of tape supplied by the supply reel differ to an abnormal extent while the tape is traveling, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)
WINDUP REEL NOT ROTA	W-UP REEL NOT ROTA	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape while the total tape amount is not detected and while the tape is traveling, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF→ON)

RS-232C Interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.
(See command tables on pages 67 to 69.)

(2) Conditions for acknowledging commands from the RS-232C interface
The front panel REMOTE/LOCAL switch must be set to REMOTE.
The setup menu item No. 204 (RS232C SEL) must be set to ON.

If the above conditions are not met, [ACK] + [STX] ER001 [ETX] is returned to the external unit.

Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 (RETURN ACK).

2. Hardware specifications

External interface specifications

(1) Connector specifications

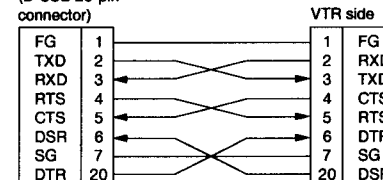
Connector: D-SUB 25-pin (crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	Not processed
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

(2) Example of connections with controller (PC)

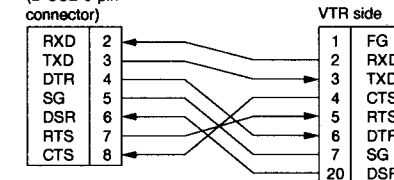
(Using crossover cable with D-SUB 25-pin connectors)

PC side
(D-SUB 25-pin connector)



(Using crossover cable with D-SUB 9-pin and 25-pin connectors)

PC side
(D-SUB 9-pin connector)



3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Baud rate	300, 600, 1200, 2400, 4800, <u>9600</u> bps
Data length	7 bits or <u>8 bits</u>
Stop bit	<u>1 bit</u> or 2 bits
Parity bit	<u>None</u> , odd or even
ACK code	ACK code returned or <u>not returned</u> <Note> The ACK code is what is returned from the VTR to the controller when data has been sent successfully from the controller.

"_" denotes the factory setting.

Changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication system	No. 205 BAUD RATE
Data length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]
02h XX XX XX 3Ah XX-XX 03h

←(ASCII code: symbols, numbers, upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: The colon serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of procedure for sending data from controller

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows, and the data is added as required.
The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 66.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX, which was received again, at the head.

RS-232C Interface

(3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response may be made.

■ When the communication has terminated normally

1. The receive completion message is returned.

[ACK]
06h

2. The execution completion message is returned.

[STX] [command] [data] [ETX]
02h XX XX XX XX-XX 03h

• [command]: This is the message (data) which is returned or the execution completion message identifier.

• [data]: This is the data to be returned. It can be omitted.

[example]: Send command Return message (data)
[STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.

[ACK]
06h

2. An error code is returned.

[STX] E R N₁ N₂ N₃ [ETX]
02h Error code 03h

4. Error code table

- ER001: Invalid command
- Unsupported command received
 - Error in command execution
- ER002: Parameter error
- ER102: VTR mode error (front loading motor)
- ER103: VTR mode error (loading motor)
- ER104: VTR mode error (drum, capstan system)
- ER105: VTR mode error (reel system)
- ER106: VTR mode error (tension system)
- ER108: VTR dew (condensation) error
- ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- Under the "return (completion) message," only the execution messages which are returned after [ACK] is returned when data is received are listed.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel.
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The output picture status differs according to the setup menu item No. 111 (FRZ MODE SEL) setting. For details, refer to the setup menu item.
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The maximum tape speed differs according to the setup menu item No. 102 (FF. REW MAX) setting. For details, refer to the setup menu item.
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The maximum tape speed differs according to the setup menu item No. 102 (FF. REW MAX) setting. For details, refer to the setup menu item.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command. data = n: speed data 0: STILL (STILL) 1: x0.03 (x0.03) 2: x0.1 (x0.1) 3: x0.2 (x0.2) 4: x0.5 (x0.5) 5: x1 (x1) 6: x1.85 (x18.5) 7: x4.1 (x3.1) 8: x9.5*1 (x9.5*1) 9: x16*1 (x16*1) A: x32*1 (x32*1) *1: [This speed differs according to the setup menu item No. 101 (SHTL MAX) setting.] The speeds for the DV format are given in parentheses.

RS-232C interface

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command. data = n: speed data 0: STILL (STILL) 1: x0.03 (x0.03) 2: x0.1 (x0.1) 3: x0.2 (x0.2) 4: x0.5 (x0.5) 5: x1 (x1) 6: x1.85 (x18.5) 7: x4.1 (x3.1) 8: x9.5*1 (x9.5*1) 9: x16*1 (x16*1) A: x32*1 (x32*1) *1: [This speed differs according to the setup menu item No. 101 (SHTL MAX) setting.] The speeds for the DV format are given in parentheses.
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is for setting the VTR to STANDBY OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is for setting the VTR to STANDBY ON.

(2) Commands related to Inquiries

<Notes>

- Under the "return (completion) message," only the execution messages which are returned after [ACK] is returned when data is received are listed.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX] data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display - (2Dh): for a minus display h = 0 - 9: hours TC: gh = 00 - 23: hours mm = 00 - 59: minutes ss = 00 - 59: seconds ff = 00 - 29: frames (525 mode) = 00 - 24: frames (625 mode)	This command is for inquiring about the counter value. CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX] xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORW: REWIND OSP: STOP (including STANDBY ON) SRS: PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE	This command is for inquiring about the VTR's operation mode.
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX] data = A-J-D940	This command is for inquiring about the VTR used.

RS-232C interface

(3) Microsoft QuickBASIC sample program

```

CLS
STX$ = CHR$(26): ETX$ = CHR$(3): NAK$ = CHR$(15): ACK$ = CHR$(6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
    WAITKEY$ = INKEY$
    IF WAITKEY$ = "Q" THEN PRINT "**** Quit ****": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RCV$ = INPUT$(1, #1)
IF RCV$ = STX$ THEN RCV$ = "[Stx]"
IF RCV$ = ACK$ THEN RCV$ = "[Ack]"
IF RCV$ = NAK$ THEN RCV$ = "[Nak]"
IF RCV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[EtX]": GOTO DispOut
BUFFER$ = BUFFER$ + RCV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END

```

Microsoft QuickBASIC is a trademark of Microsoft Corporation.

Connector Signals

REF VIDEO IN

REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided
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VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3
Y, P _B , P _R (ANALOG)	BNC × 3
VIDEO OUT	BNC × 3

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3	<table><tr><th>Pin No.</th><th>Signal</th></tr><tr><td>1</td><td>GND</td></tr><tr><td>2</td><td>HOT</td></tr><tr><td>3</td><td>COLD</td></tr></table>	Pin No.	Signal	1	GND	2	HOT	3	COLD
Pin No.	Signal									
1	GND									
2	HOT									
3	COLD									
AUDIO OUT (DIGITAL)	XLR × 2 CH1/CH2, CH3/CH4 AES/EBU format									
AUDIO OUT (ANALOG)	XLR × 4 CH1, CH2, CH3, CH4									
CUE OUT	XLR × 1									
TIME CODE OUT	XLR × 1									
MONITOR OUT	XLR × 2 L/R									
HEADPHONES (front panel) 1/4" phone										

RS-422A REMOTE (9P)

REMOTE IN

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	—————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	—————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

Connector Signals

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	—————	19	STAND BY ON STATUS
2	STOP COMMAND	11	—————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	—————	14	STOP STATUS	23	—————
6	EJECT COMMAND	15	FF STATUS	24	—————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	—————		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- Supply TTL level, active low electrical signals with an edge of 100 ms or more to the COMMAND pins.
- The STATUS pins are open collector outputs; a max. sink current of 6 mA is output from these pins.

RS-232C REMOTE (D-SUB 25 pins, crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Data is sent to PC.
3	TxD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	Not processed
7	GS	Signal ground	Signal ground
20	DSR	Data set ready	+ power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	—————	6	SYSTEM H 0	11	RET GND
2	SET UP	7	SYS.SC COARSE (2)	12	—————
3	C LEVEL	8	-12V	13	—————
4	GND	9	HUE	14	SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Operating instruction for AJ-D940E

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Before attempting to operate the unit, check that all the accessories are present and accounted for.

Power cord....1 pc

Options

- AJ-CS750P cassette adapter
- AJ-MA75P rack-mounting adapters

Introduction and Features

The AJ-D940 is a multi-purpose studio digital VTR which uses 1/4-inch wide compact cassette tapes and which is designed exclusively for slow-motion playback with a high picture quality at a 50 Mbps video recording rate. It is capable of playing back existing DVCPRO (25 Mbps) cassette tapes as well. It is equipped with a 525/625 switchable function to enable it to be operated as a studio VTR anywhere in the world.

This VTR with its high picture quality, which is due to the incorporation of digital compression technology, significantly reduces the deterioration in the quality of both sound and pictures which accompanies dubbing operations. Its compact 4U size and light-weight design makes it easy for the unit to be carried around and installed in a 19-inch rack.

A dialogue system enables the unit's setup settings to be performed while monitoring the on-screen menus that appear on the TV monitor.

Features

Compact size and light weight

This digital VTR has a 4U size. This means that it is easy to install it in a 19-inch rack, too, if the rack-mounting adapters (optional accessory, AJ-MA75P) are used.

Up to 92 minutes of playback time

Two sizes of cassette tape, the M size (for up to 33 minutes of playback time) and L size (for up to 92 minutes of playback time), can be used with this unit.

The tape has a 1/4-inch width for a compact design.

High picture quality

A high picture quality is achieved using 4:2:2 component signals whose recording rate is twice as high as that of the existing DVCPRO format.

625i/525i switchable function

By setting the 625i/525i selector switch to the setting that corresponds to the TV system of the signals (625i or 525i) recorded on the tape, the signals of either TV system can be played back.

Compatibility with DVCPRO format

Tapes recorded using the existing DVCPRO format can be played back on this unit.

Compatibility with general consumer video equipment

Cassette tapes designed for general consumer applications containing material shot by a consumer digital camera can be played back on this unit if the cassette adapter (optional accessory, AJ-CS750P) is used.

<Note>

Tapes recorded in the LP consumer mode cannot be played back.

Digital slow motion/dial jog functions

Using Panasonic's very own digital slow-motion technology, pictures played back in slow motion at the following speeds can be reproduced clearly.

DVCPRO50 (50 Mbps): -1x to +1x speed

DVCPRO (25 Mbps): -2x to +2x speed

DV: ±0.03x, ±0.07x, ±0.1x, ±0.2x, ±0.4x to ±1x

Dial shuttle function

Shuttle operations enable colour pictures to be played back in the forward or reverse direction at a maximum of 32 times the normal tape speed.

Time code

The unit contains a time code reader (TCR).

Introduction and Features

Features

(continued)

Multi-functional interface capability

- **Serial digital output**

The unit is equipped with a component serial interface connector to enable interfacing with serial digital component signals. (EBU Tech. 3267-E)

- **Analogue video output**

Both component (Y, Pb, Pr) and composite output connectors are provided.

- **AES/EBU audio output**

The unit comes with digital audio output connectors.

- **SDTI output (option)**

- **9-pin RS-422A/RS-232C remote**

In addition to the standard 9-pin serial remote (RS-422A) connector, both RS-232C and 25-pin parallel remote connectors are provided.

4-channel digital audio for high sound quality

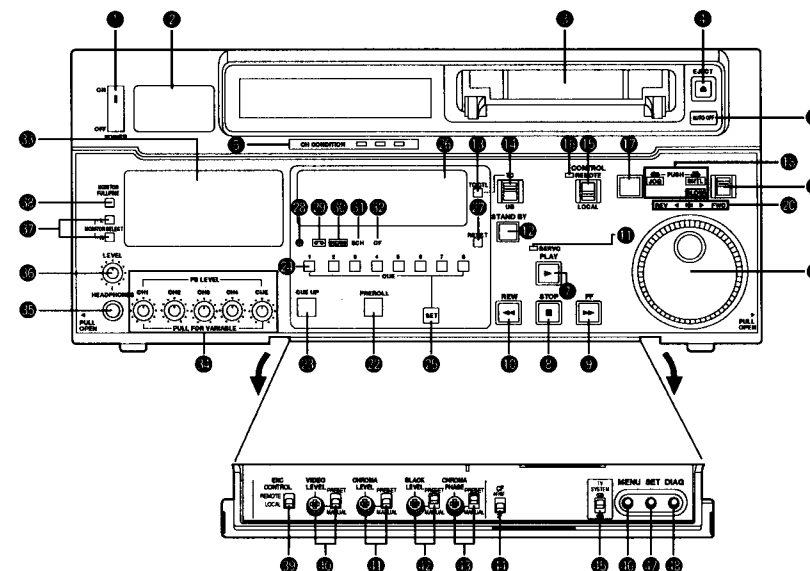
A 4-channel PCM audio capability plus another channel for the analogue cue track is featured.

Menu-operated setup

The settings for the setup prior to operating the unit are performed while viewing the setup menus which appear on the unit's display or the TV monitor.

Parts and Their Functions

Front panel



Parts and Their Functions

<Front panel top area>

- ❶ **POWER switch**
- ❷ **TV system and format display**

The selected TV system and format are displayed here.

<625/525>
625: This lights when the 625 TV system is selected.
525: This lights when the 525 TV system is selected.

<25 Mbps/50 Mbps>
25 Mbps: This indicates the DVCPRO (25 Mbps) and DV playback mode.
In the case of the DVCPRO (25 Mbps) playback mode, the DVCPRO (25 Mbps) cassette playback display lamp ❸ in the centre of the front panel also lights.
50 Mbps: This indicates the DVCPRO50 (50 Mbps) playback mode.
- ❸ **Cassette insertion slot**
- ❹ **EJECT button**

When this button is pressed, the tape inside is unloaded and several seconds later it is automatically ejected.
If the counter display area is set to the CTL display, the display will be reset.
- ❺ **Channel condition lamps**

One of these lamps lights in accordance with the error rate statuses. (Green → Amber → Red)

Green: This lamp lights when the error rates for both the video and audio playback signals are at an acceptable level.

Amber: This lamp lights when the error rate for either the video and audio playback signals has deteriorated. A normal playback picture will appear even when this lamp is lit.

Red: This lamp lights when either the video or audio playback signals are subject to correction or interpolation.
- ❻ **AUTO OFF lamp**

This lights when trouble has occurred in the unit's operation.

Parts and Their Functions

<Front panel centre>

- ❶ **PLAY button**

This button is pressed to commence playback.
- ❷ **STOP button**

This button is pressed to stop the tape travel.
The tape drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.
When the stop mode continues beyond the prescribed period of time, the unit is automatically set to the standby OFF mode in order to protect the tape.
The stop mode is established immediately after a cassette has been inserted into the unit.
- ❸ **FF button (see *1)**

This button is pressed to fast forward the tape.
- ❹ **REW button (see *1)**

This button is pressed to rewind the tape.
- ❺ **SERVO lamp**

This lamp lights when the drum servo and capstan servo lock.
- ❻ **STANDBY button**

While the same level of tape tension is applied as in the regular stop mode and the head drum continues to rotate, the lamp in the button lights to indicate that the standby ON mode is established.
The tape is set to the half-loading mode when the standby OFF mode is established.
When this button is pressed in the stop mode, the standby OFF mode is established and the tape is set to the half-loading mode. At this time, the lamp in the button will go off.
When the stop mode continues beyond the prescribed period of time, the unit is automatically set to the standby OFF mode in order to protect the tape.
When either this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established. When a function button other than the STOP button is pressed, the tape will be set to the mode corresponding to the pressed button.
The time taken for operation to transfer to the standby OFF mode can be set on-screen.
- ❼ **TC/CTL switch**

When this switch is pressed, what appears on the counter display changes from TC to CTL or vice versa. When TC is selected, either the TC or UB value will be displayed depending on the position to which the TC/UB switch has been set.
- ❽ **TC/UB switch**

This selector switch is used to indicate either the TC value or UB value on the counter display area when the TC/CTL switch has been set to the TC position.
- ❾ **REMOTE/LOCAL switch**

This switch is provided to enable the unit to be controlled from an external source using the REMOTE, RS-232C or parallel connector.
REMOTE: Set here when the unit is to be controlled using the 9-pin REMOTE, RS-232C or parallel remote connector.
LOCAL: Set here when the unit is to be controlled using the controls on its operation panel.

*1 The fast forward or rewind speed can be selected using setup menu item No. 102 (FF.REW MAX).

Parts and Their Functions

<Front panel centre>

⑫ REMOTE lamp

This lamp lights when the REMOTE setting has been selected by the REMOTE/LOCAL switch.

⑬ Search button

This button is pressed to establish the search mode.

When this button is pressed after the search dial is set to the shuttle mode and turned to the desired position, playback will commence at the speed which has been set by the search dial.

⑭ JOG, SHTL and SLOW lamps

These lamps indicate the current status of the search dial and SHTL/SLOW switch.

JOG: This lights when the JOG mode is established.

SHTL (shuttle): This lights when the SHTL mode is established.

SLOW: This lights when the VAR mode is established.

⑮ SHTL/SLOW switch

This selector switch is set when the search dial is to be used for SHTL or VAR purposes.

⑯ REV, STILL and FWD lamps

These lamps light in accordance with the search dial operation.

REV: This lights when the dial is rotated counterclockwise, and if the search button lamp is also lit at this time, the tape travels in the reverse direction.

STILL: In the JOG mode this lights when the dial rotation is stopped, and if the search button lamp is also lit at this time, the tape also stops travelling.
In the shuttle mode, it lights when the dial is at the STILL position.

FWD: This lights when the dial is rotated clockwise, and if the search button lamp is also lit at this time, the tape travels in the forward direction.

⑰ Search dial

This dial is used to locate the edit points.

Each time the dial is pressed, the shuttle mode or jog mode is selected alternately, and the JOG, SHTL or SLOW lamp lights.

When the unit's power is turned on, the search dial will not work unless it is first returned to the STILL position.

SHTL (shuttle) mode: If the dial is rotated and stopped at the desired position when the SHTL/SLOW switch has been set to SHTL, the tape can be played back at the speed that corresponds to the angle to which the dial has been rotated. A still picture will appear when the dial is set to its centre position.

When the SHTL/SLOW switch has been set to SLOW, the tape will travel at the -4.1x speed if the dial is rotated counterclockwise as far as it will go, a still picture will appear when it is set to its centre position, and the tape will travel at the +4.1x speed if the dial is rotated clockwise as far as it will go. The maximum speed at the SLOW setting can be selected by setup menu item No. 320 (VAR FWD MAX) or No. 321 (VAR REV MAX).

Jog mode: The dial's clickstop positions are cleared, and the tape is played back at the speed (see *) that corresponds to the speed with which the dial is rotated.

*) DVCPRO50 (50 Mbps): -1x to +1x speed

DVCPRO (25 Mbps): -2x to +2x speed

DV: -1x to +1x speed

Parts and Their Functions

<Front panel centre>

⑱ PREROLL button

This button is used to cue the tape for a transmission, etc.

If it is pressed when a CUE point has been selected (when the CUE lamp is flashing), the tape is prerolled to the CUE point, and a still picture appears on the screen.

If it is pressed when a CUE point has not been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

• The preroll time can be set using setup menu item No. 000 (P-ROLL TIME).

⑲ CUE UP button

This button is used to cue the tape for a transmission, etc.

If it is pressed when a CUE point has been selected (when the CUE lamp is flashing), the tape is prerolled to the CUE point, and a still picture appears on the screen.

If it is pressed when a CUE point has not been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

• The preroll time can be set using setup menu item No. 016 (CU-ROLL TIME).

⑳ CUE buttons 1 through 8

These buttons are used to enter, check or erase cue points.

When a button is pressed at a cueing position on the tape, the cue point will be entered in that button.

To check a cue point which has been entered, press the CUE button in which the point was entered.

To erase a cue point, press the RESET button while holding down the CUE button.

㉑ SET button

This button is used when cue points are to be entered or erased.

When it is pressed at the cueing position, the cue point will be entered and the corresponding CUE button's lamp will light. When it is pressed at positions to which the tape is to be successively cued, the CUE buttons in which no cue points have been entered will light in sequence starting with the lowest number, and the cue points will be entered.

When the RESET button is pressed while the SET button is held down, all the registered cue points will be deleted.

㉒ Counter display area

The TC and CTL count values as well as the messages and other on-screen information appear on the counter display area.

㉓ RESET button

When this button is pressed in the CTL mode, the display is cleared to "00:00:00:00."

㉔ Warning lamp

This lamp lights when a warning is issued.

㉕ Cassette insertion display lamp

This lamp lights when a cassette has been inserted into the unit.

㉖ DVCPRO (25 Mbps) cassette playback display lamp

This lamp lights when a cassette recorded using the DVCPRO (25 Mbps) format is played back.

㉗ SCH lamp

This lamp lights when the SCH phase of the external sync signal is within the specified range.

Parts and Their Functions

<Front panel centre>

⑫ CF lamp

This lamp lights when the colour framing is locked.

⑬ Level meter

The playback levels for channels 1, 2, 3 and 4 of the PCM audio signals and for the cue track signals are displayed by this meter.

⑭ Audio output level controls

These controls are used to adjust the playback levels for channels 1, 2, 3 and 4 of the PCM audio signals and for the cue track signals.

They use a "pull to vary level" system which means that the levels can be adjusted after they have been pulled up. The unity (default) levels apply when they are pushed down.

⑮ Headphones jack

When a pair of stereo headphones are connected to this jack, the sound being played back can be monitored through the headphones.

⑯ Volume control

This control is used to adjust the headphones volume and monitor output volume.

Setup menu item No. 713 (MONI OUT) can be used to set whether the headphones output and monitor output are to be linked together or separated. (However, the headphones are always linked to the monitor output.) When the two outputs are separated, the monitor output is set the unity (default) level.

⑰ MONITOR SELECT switches

These switches are used to select the audio signals which are to be output to the monitor L and R channels.

Each time the "L" button is pressed, the signals which are to be output to the monitor L channel are switched in the following sequence: CH1, CH2, CH3, CH4, CUE, CH1, etc.

[This switching is disabled when CH1+2 or CH3+4 has been selected as the setup menu item No. 729 (MONI MIX L) setting.]

Each time the "R" button is pressed, the signals which are output to the monitor R channel are switched in the following sequence: CH1, CH2, CH3, CH4, CUE, CH1, etc.

[This switching is disabled when CH1+2 or CH3+4 has been selected as the setup menu item No. 730 (MONI MIX R) setting.]

The signals which have been selected are indicated by the L or R lamps which light on the level meter display area. [When AUTO has been selected as the setup menu item No. 721 (MONI CH SEL) setting, the display is switched in tandem with the monitor output.]

⑱ METER (FULL/FINE) selector switch

This switch is used to select the scale display on the audio level meter.

FULL mode: The standard scale (ranging from $-\infty$ to 0 dB) is selected.

FINE mode: The scale in 0.5 dB increments is selected.

Parts and Their Functions

<Front panel bottom>

① ENCODER CONTROL switch

This switch is used to select whether the adjustments of the video output signals are to be performed using the controls either on the unit or on an external encoder remote controller.

REMOTE: The video output signals are adjusted using the controls on the external encoder remote controller.

LOCAL: The video output signals are adjusted using the controls on the unit.

② VIDEO LEVEL control and switch

These enable the video level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.

When the VIDEO LEVEL switch is set to PRESET, the video level is set to the unity (0 dB) level. When it is set to MANUAL, the video level can be adjusted using the control.

③ CHROMA LEVEL control and switch

These enable the chroma level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.

When the CHROMA LEVEL switch is set to PRESET, the chroma level is set to the unity (0 dB) level. When it is set to MANUAL, the chroma level can be adjusted using the control.

④ BLACK LEVEL control and switch

These enable the black level to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.

When the BLACK LEVEL switch is set to PRESET, the black level is set to the unity (0 IRE) level. When it is set to MANUAL, the black level can be adjusted using the control.

⑤ CHROMA PHASE control and switch

These enable the chroma phase to be adjusted when the ENCODER CONTROL switch has been set to the LOCAL position.

When the CHROMA PHASE switch is set to PRESET, the hue is set to the unity (0°) level. When it is set to MANUAL, the chroma phase can be adjusted using the control.

⑥ CF switch

This switch is used to select either 4- or 8-field or 2-field increments for the playback framing lock.

4F/8F: 625 mode = The framing is locked in 4 or 8-field increments. The setup menu item No. 108 (CAP.LOCK) setting is used to switch between 4-field or 8-field increments.

525 mode = The framing is locked in 4-field increments.

2F: The framing is locked in 2-field increments.

⑦ TV SYSTEM selector switch

This switch is used to select the TV system. For this setting to take effect, the power must be turned off and then turned back on.

625: The 625 interlace/50 Hz TV system is selected.

525: The 525 interlace/59.94 Hz TV system is selected.

For playback, make sure that the switch is set to the position that corresponds to the TV system, 625i or 525i, which was used when the tape was recorded.

Parts and Their Functions

<Front panel bottom>

⑭ MENU button

When this button is pressed, the setup menu appears on the TV monitor (but only when the VIDEO OUT 3 connector is used), and the setup menu number appears on the unit's display. When it is pressed again, the setup menu setting is exited and the original operation is restored.

⑮ SET button

When this button is pressed, the data which has been set on the setup menu is entered. After the data has been entered, the setup menu setting is exited and the original operation is restored.

⑯ DIAG button

When this button is pressed, the VTR information is displayed. When it is pressed again, the original display is restored.

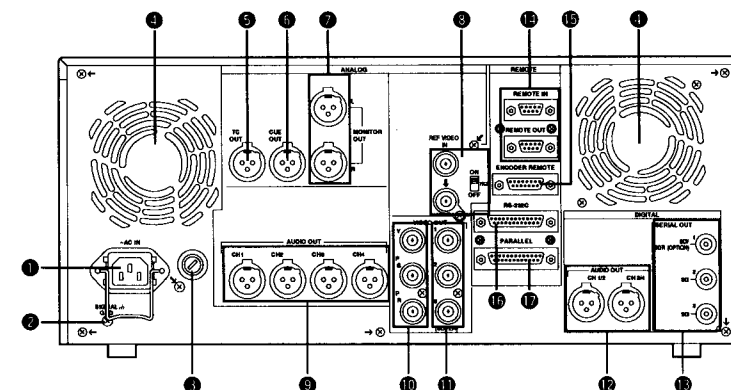
The VTR information consists of the HOUR METER information and WARNING information. The search button is pressed to switch between the displays of the two types of information.

Displayed on the HOURS METER screen are the deck's serial number, power-on time, drum rotation time, tape travel time, number of times the cassette has been loaded, and the number of times the power has been switched on and off.

Displayed on the WARNING screen is the nature of the warnings issued.

Parts and Their Functions

Connector panel



Parts and Their Functions

<Connector panel>

- ❶ **AC IN socket**
This is connected to the power outlet using the accessory power cord.
- ❷ **SIGNAL GND terminal**
This is connected to the signal ground terminal on the connected component for noise reduction purposes. It is not a safety ground.
- ❸ **Fuse holder**
This contains a fuse.
- ❹ **Fan motor**
This motor drives the fan that cools down the unit.
The ● lamp lights when trouble in some form or other has caused the fan motor to shut down. If operation is continued while this warning condition persists, the temperature inside the deck will rise, and once it has exceeded the safe temperature level, all the unit's operations will be shut down.
- ❺ **TIME CODE OUT connector**
The playback time code signals are output from this connector.
- ❻ **CUE OUT connector**
The analogue signals recorded on the CUE track are output from this connector.
- ❼ **MONITOR OUT connectors**
The PCM audio signals of CH1, CH2, CH3 and CH4 or the playback signals from the CUE track are output from this connector.
- ❽ **REF VIDEO IN connectors and 75Ω termination switch**
These are the input connectors for the reference video signal.
Supply a composite video signal such as a black burst signal complying with the broadcast standards (see *1). Set the switch to ON for a 75Ω termination.
*1 625: CCIR624
525: RS-170A
- ❾ **ANALOG AUDIO OUT connectors**
The analogue audio signals are output from these connectors.
- ❿ **ANALOG COMPONENT VIDEO OUT connectors**
The analogue component video signals are output from these connectors.
- ⓫ **ANALOG COMPOSITE VIDEO OUT connectors**
The analogue composite video signals are output from these connectors. Video signals with superimposed characters can be output from the VIDEO OUT 3 connector. Use setup menu item No. 007 (SUPER) to select ON or OFF as the superimposed character setting.
- ⓬ **DIGITAL AUDIO OUT connectors**
Digital audio signals complying with the AES/EBU standards are output from these connectors.
- ⓭ **SERIAL DIGITAL COMPONENT AUDIO/VIDEO OUT connectors**
Digital component audio and video signals complying with the EBU Tech. 3267-E standards are output from these connectors.

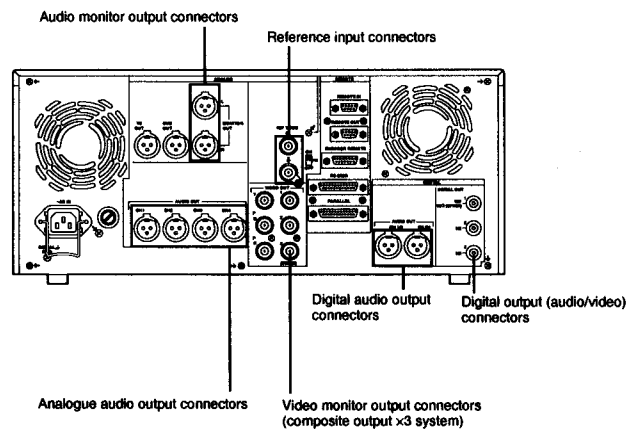
Parts and Their Functions

<Connector panel>

- ⓮ **Remote control connectors**
The unit can be operated from an external source when it is connected with another player for deck-to-deck editing or with an external controller. There are two remote control connectors, one for input signals (IN) and the other for output signals (OUT).
IN: To be connected with an external controller.
To be connected for deck-to-deck operations.
OUT: To be connected for parallel run operations.
To be used for loop-through applications.
- ⓯ **ENCODER REMOTE connector**
This is connected to an external encoder remote controller when the video output signal settings are to be adjusted from an external source.
- ⓰ **RS-232C connector**
- ⓱ **PARALLEL REMOTE connector**
This is used when the unit is to be operated from an external source.

Connections using one unit

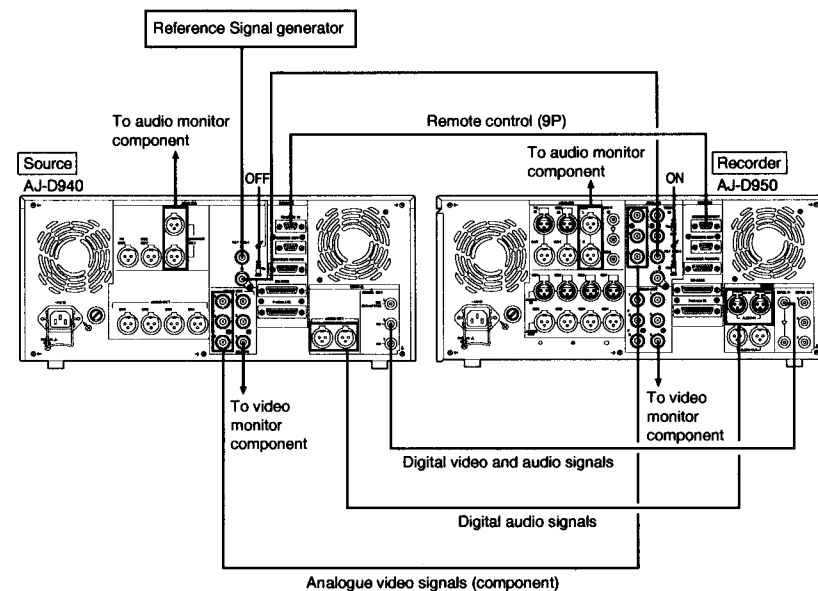
Set the CONTROL switch on the front panel to LOCAL.



Example of connections when the unit is used as the source machine for editing (deck-to-deck)

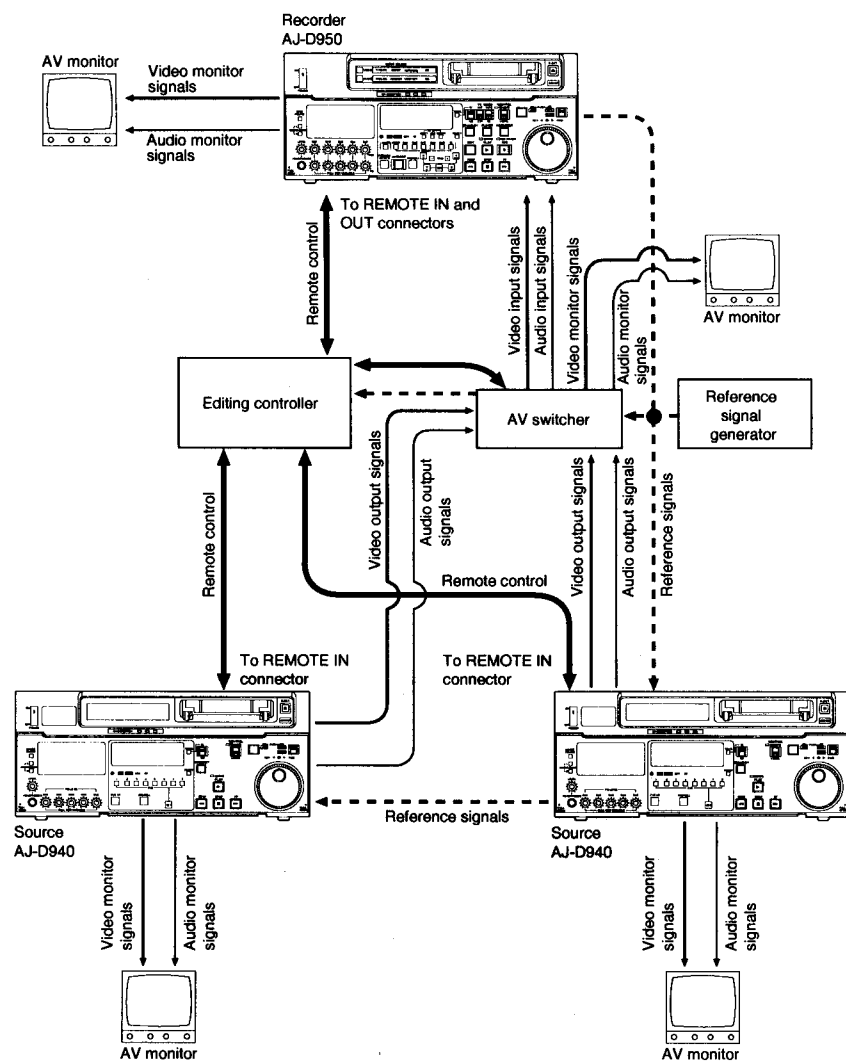
Source unit: Set the CONTROL switch on the front panel to REMOTE.

Recorder unit: Set the CONTROL switch on the front panel to LOCAL.



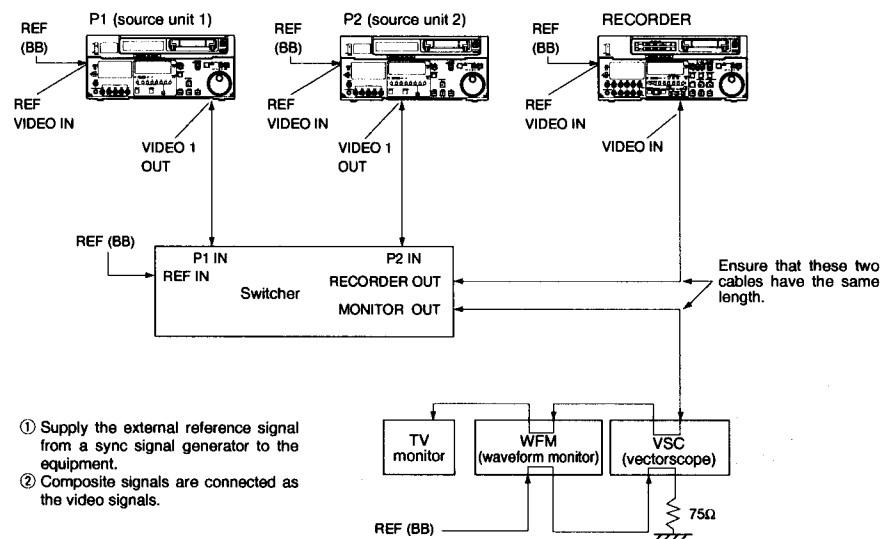
AJ-D950:
The analogue video input board (optional accessory) must be installed for use.

Example of connections with an editing controller



<Note>
If an editing controller made by CMX is to be used, steps must be taken at the editing controller side to support it.

Connections for adjusting the video output signals (encoder output)

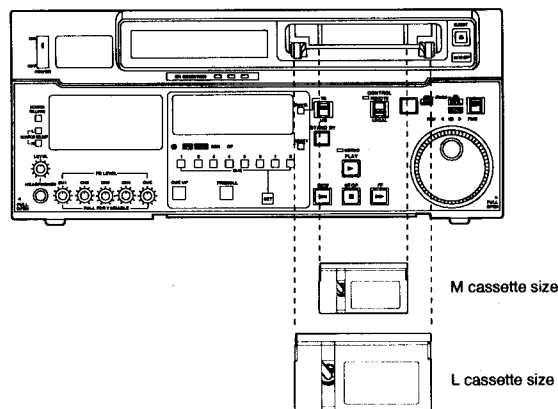


- ① Supply the external reference signal from a sync signal generator to the equipment.
- ② Composite signals are connected as the video signals.

Tapes

Type	Description
Consumer cassette (S size cassette)	These tapes are exclusively used with general consumer camera/recorders. They can be played back on the unit if a cassette adapter AJ-CS750P (available as an optional accessory) is used. However, bear in mind that long-playing cassette tapes (80 minutes in the standard mode; 120 minutes in the LP mode) cannot be used. It is recommended that Panasonic's DV tapes for general consumer applications be used. Bear in mind that inserting one of these cassette tapes without first installing the cassette adapter will cause malfunctioning.
M size cassette	Tapes with a maximum playback time of 33 minutes. (AJ-P66MP)
L cassette	DVCPRO (50 Mbps)
	For consumer use
	Standard playback cassette tapes for consumer use. For playback, select DV as the setup menu item No. 014 (FORMAT SEL) setting. Use of Panasonic's consumer-use DV tapes is recommended.

Align the cassette with the centre of the insertion slot, and gently push it inside. The cassette tape is automatically loaded.



<Note>

For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

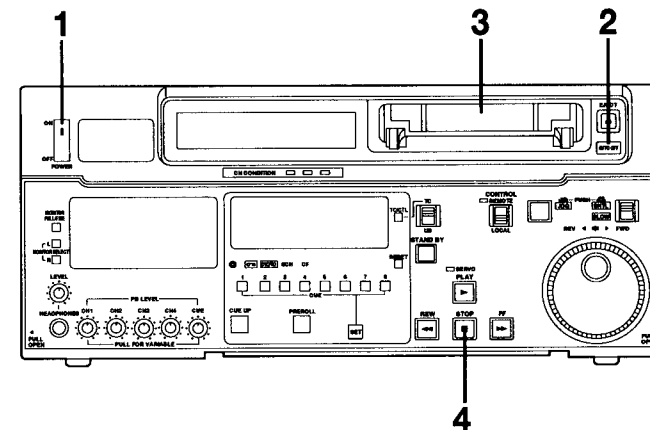
<Precautions when playing back general consumer DV tapes>

- General consumer tapes recorded in the LP mode cannot be played back.
- When material recorded on a general consumer tape is to be edited, either use a DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) tape or record the material on another VTR used for broadcast applications.
- The maximum speed at which general consumer tapes can be advanced is 32 times the normal tape speed.
- The maximum still mode time for general consumer tapes is set to 10 seconds.
- Cueing up a general consumer tape at the same position should be kept to the minimum in order to protect the tape from damage.
- The maximum time for STILL TIMER when a general consumer tape is used is set to 10 seconds, and the total time during which such a tape may be left standing in the STILL mode is set to 1 minute.

Switching on the Power/Inserting the Cassette

Before starting to operate the unit, check that the equipment has been connected properly.

- 1 Turn on the power.
- 2 Check that the AUTO OFF lamp is off.
In the event of condensation or other trouble, the AUTO OFF lamp lights, and all of the unit's operations are disabled.
- 3 Insert the cassette tape.
Insert the tape into the prescribe position without forcing it in any way.
- 4 Check that the STOP lamp is lit.
When the tape is inserted, the cylinder starts rotating automatically, the tape is loaded, and the STOP mode is established.
The EJECT lamp now goes off.

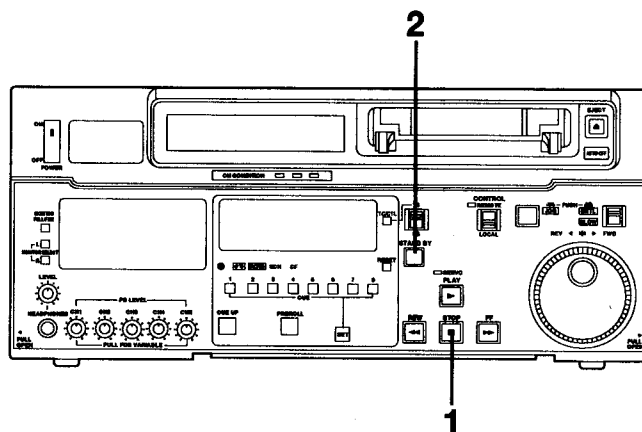


STOP/STANDBY mode

- 1 The stop mode is established when the STOP button is pressed. The STOP lamp lights, and the tape stops travelling.
 - In order to protect the tape, the standby OFF mode is established after the time set in setup menu item No. 400 (STILL TIMER) has elapsed.
 - When the STOP, REW, FF or PLAY button is pressed, the corresponding mode is established.
- 2 When the STANDBY button is pressed, the standby ON or OFF mode is established. The standby ON mode is established while the button's lamp is lit. When the button is pressed in the stop mode, the standby OFF mode is established, the tape is set to the half-loading status, and the button's lamp goes off. When the button is pressed in the standby OFF mode, the standby ON mode is established.

<Precautions for the STILL TIMER setting>

- Remember that at times when the same material is repeatedly used such as when programmes are aired, the cumulative standby time in the same position will be increased.
- In order to protect the tape, make the standby time at the same tape locations as short as possible: for instance, select a maximum of 30 seconds or so as the setup menu item No. 400 (STILL TIMER) setting.



Playback

- 1 Insert the cassette tape and set the unit to the STOP mode.
- 2 Press the PLAY button. Normal playback now commences.
- 3 Adjust the audio playback levels. Pull out the audio level controls, and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept at their pushed-in positions (unity level).
- 4 To end playback, press the STOP button. The unit is now set to the stop mode.

<Note>

Check that the SERVO lamp remains lit during playback. The playback pictures will be disturbed if the lamp is flashing or off.

Jog/Shuttle

Jog mode

- 1 Push the search dial to set it to its "in" position. Check that the JOG lamp is lit.
- 2 Rotate the search dial.
The clickstop positions of the dial are cleared, and the tape is played back at a speed (-1x to +1x) corresponding to the speed at which the dial is rotated. When the rotation of the dial is stopped, a still picture appears. The playback picture is free from noise.
- 3 To transfer operation from the jog mode to another mode, press the button which corresponds to the mode which is to be transferred to.

Shuttle mode

- 1 Push the search dial to release it from its "in" position.
The SHTL lamp now lights, and the shuttle mode is established.
• Immediately after the power is turned on, rotate the search dial and set it to its centre position.
- 2 Set the SHTL/SLOW switch to the SHTL or SLOW position.
- 3 Rotate the search dial.
When the SHTL/SLOW switch is set to the SHTL position, the speed of the playback picture is varied in the 0 to $\pm 32\times$ range depending on the dial's position. (The speed can be switched to $\pm 8.4\times$, $\pm 16\times$ or $\pm 32\times$ using setup menu item No. 101 (SHTL MAX).)
The dial is set to the clickstop at the centre: at this position a still picture appears on the screen.
When the SHTL/SLOW switch is set to the SLOW position, the speed of the playback picture is varied in the $-4.1\times$ to $+4.1\times$ range depending on the dial's position. (The maximum speed can be selected using setup menu item No. 320 (VAR FWD MAX) and No. 321 (VAR REV MAX). However, noise will appear at any speed outside the $-1\times$ to $+1\times$ range for the DVCPRO50 (50 Mbps) format, the $-2\times$ to $+2\times$ range for the DVCPRO (25 Mbps) format and the $-1\times$ to $+1\times$ range for the DV format.) The dial is set to the clickstop at the centre: at this position a still picture appears on the screen.
The playback picture is free from noise.
- 4 To transfer operation from the shuttle mode to another mode, press the STOP button or another button.

<Note>

The unit is set at the factory in such a way that operation will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient to transfer directly to the variable speed mode, operation transfer can be set up to go through the search button. Set setup menu item No. 100 (SEARCH ENA) to KEY.

MULTI CUE Function

Entering CUE points

■ Automatic entry

Using the search dial or in the PLAY mode, press the SET button at the place where the tape is to be cued. The CUE button in which the CUE point was entered now lights.

Each time the SET button is pressed at the next place where the tape is to be cued, the CUE point will be entered into the CUE button, in which a CUE point has not yet been entered, in sequence starting with the button having the lowest number.

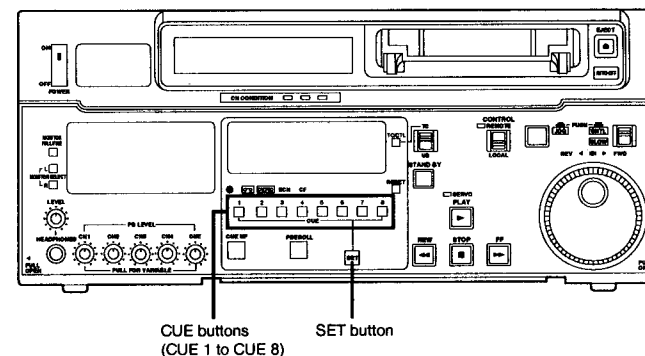
<Note>

When CUE points are entered in all 8 buttons, no further points will be entered even when the SET button is pressed. In this case, either overwrite an existing entry using the procedure for entry into a particular CUE button or reset the CUE point entry and then enter another CUE point.

■ Entry into a particular CUE button

There are two procedures for entering a CUE point into a particular CUE button.

- When a CUE point is to be entered into a CUE button in which no CUE point has been entered, press one of the CUE buttons (CUE 1 to CUE 8) directly at the place where the tape is to be cued. The lamp of the CUE button which was pressed now lights, indicating that the CUE point has been entered for that button.
- When a CUE point is to be entered into a CUE button in which a CUE point has already been entered, press the CUE button and SET button together at the place where the tape is to be used. In this case, the previous CUE point in the CUE button will be overwritten and a new CUE point will be entered.



MULTI CUE Function

Checking CUE points

Press one of the CUE buttons in which a CUE point has been entered to check the CUE point. The value of the entered CUE point appears on the display and the CUE button which was pressed now flashes. To release the flashing of the CUE button, either press the flashing CUE button or press another CUE button in which a CUE point has been entered. In this case, the flashing moves to the CUE button which was pressed.

■ Cueing up the tape to the CUE point

Press the CUE UP button while the CUE button is flashing. When this button is pressed, the tape is prerolled to the CUE point, and a still picture appears on the screen.

- The preroll time can be set using setup menu item No. 016 (CU-ROLL TIME).
- The mode to be established upon completion of the prerolling can be set to the STOP or STILL by setting setup menu item No. 315 (AFTER CUE-UP).

<Note>

If the button is pressed when no CUE point has been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.

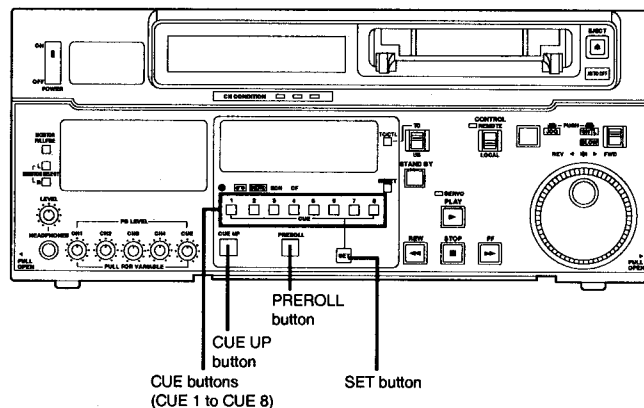
■ Prerolling the tape to the CUE point

Press the PREROLL button while the CUE button is flashing. When this button is pressed, the tape is prerolled to the CUE point, and a still picture appears on the screen.

- The preroll time can be set using setup menu item No. 000 (P-ROLL TIME).
- The mode to be established upon completion of the prerolling can be set to the STOP or STILL by setting setup menu item No. 315 (AFTER CUE-UP).

<Note>

If the button is pressed when no CUE point has been selected, the tape will be prerolled from the point where the button was pressed, and a still picture will appear on the screen.



MULTI CUE Function

Clearing CUE points

■ Clearing a particular CUE point

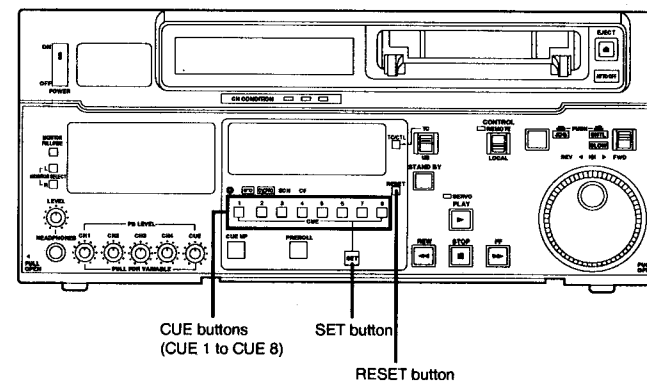
Press the RESET button while holding down the CUE button in which the point to be cleared has been entered. The entered CUE point will be reset, and the lamp of the CUE button concerned will go off at the same time.

■ Clearing all the CUE points together

Press the RESET button while holding down the SET button. All the entered CUE points will be reset and all the lamps of the CUE buttons will go off at the same time.

<Notes>

- The following applies when the CTL mode has been set. When the RESET button is pressed while the SET button is held down, all the entered CUE points will be reset but the CTL value will not be reset. Conversely, when the SET button is pressed while the RESET button is held down, all the entered CUE points will be reset and the CTL value will also be reset.
- The entered CUE points are not reset even when the tape is ejected. In the CTL mode, only the CTL value is reset.



Video Output Signal (Encoder Output) Adjustments

In order to ensure an accuracy which is free from errors during editing when proceeding with AB roll editing (editing using two source units) using editors, it is necessary to adjust the video output signal (ENCODER OUT) after the system connections have been performed. (These adjustments must be performed again each time a connecting cable has been replaced or the connections are changed.)

The adjustment procedure for this unit is described below.

- 1 Check the connections. (See page 21)
- 2 Set the **REMOTE/LOCAL** switch at the bottom of the front panel to the adjustment position (LOCAL).
REMOTE: The video output signals are adjusted using the external encoder remote controller.
LOCAL: The video output signals are adjusted using the controls on this unit.
- 3 Perform the adjustments separately for each source unit.
 - 3-1 **When the preset values are to be used**
 Set the PRESET/MANUAL switches for VIDEO LEVEL, CHROMA LEVEL, BLACK LEVEL and CHROMA PHASE to the PRESET position.
 - 3-2 **When adjusting the video output signals without using the PRESET values**
 - 1 Play back a cassette tape on which standard colour bars have been recorded.
 - 2 Adjust the controls in such a way that the following will appear on the waveform monitor (WFM) and vectorscope (VSC).

A Black level:

Adjust in such a way as to eliminate any deviation.

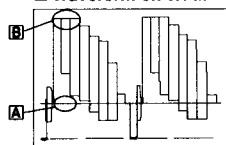
B Video level:

Adjust to 700 mV.

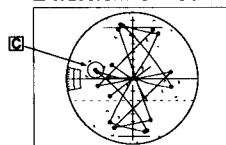
C Chroma level and chroma phase:

Adjust the two controls and place the vector waveform traces within the square grid mark.

■ Waveform on WFM



■ Waveform on VSC



- 4 Adjust the connected source units in the same way.

Setup (Default Settings)

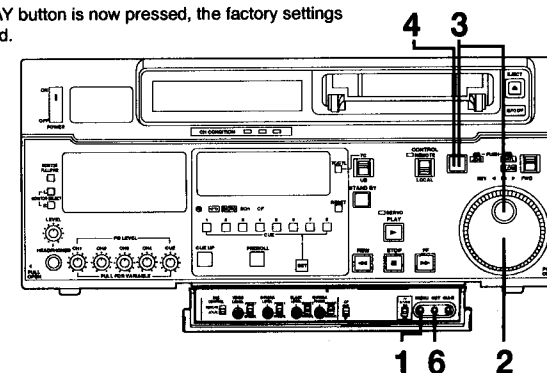
The unit's main settings are performed while making selections using a menu system. The setting menus will appear on a TV screen when the VIDEO OUT 3 connector on the connector panel has been connected to a TV monitor.

Changing the settings

- 1 Press the MENU button.
 The setup menu screen appears on the TV monitor, and the setup menu item number appears on the unit's counter display.
 (When setup has already been performed, the screen showing the changes made last is displayed.)
- 2 Rotate the search dial and select the item to be set.
 The cursor (*) moves on the menu screen, and the item number on the display flashes.
 • When the dial is rotated clockwise, the flashing item number is incremented (001 → 002 → 003 → 004 → and so on); when it is rotated counterclockwise, it is decremented.
 • When the FF or REW button is pressed while the PLAY button is held down, the next or previous item is selected.
 • Use the search dial in the JOG mode whenever possible.
- 3 Rotate the search dial while holding down the search button at the position where the change is to be made. The menu screen and setting on the display flash.
 When the dial is rotated clockwise, the setting is incremented; when it is rotated counterclockwise, it is decremented.
- 4 Release the search button when the settings are completed. The item number now flashes.
 • When the search dial is in the SHTL mode, the item will move unless the dial is held at the STILL position.
- 5 Repeat steps 2 to 4 if another item is to be changed.
- 6 Press the SET button. The changes made are now stored in the memory. To return the settings to what was set before the changes were made, press the MENU button.
 • To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. The following message will appear.

SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>

When the PLAY button is now pressed, the factory settings will be restored.



<Notes>

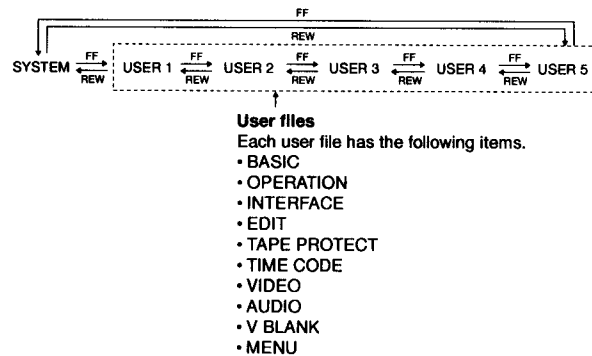
- When the RESET button is pressed to restore the factory settings, the change will be made for the user file in current use only. The other user files will not be affected.
- The changes made to the SYSTEM menu settings can be stored in the memory also by pressing the MENU button.

Setup (Setting) Menus

This unit offers five user files each of which can hold different menu settings. One of these files can be selected for use as the situation demands.

Changing the file

- 1 Press the MENU button.
- 2 When the FF button is pressed while the STANDBY button is held down, the next user file is selected in place of the current user file. Conversely, when the REW button is pressed while the STANDBY button is held down, the previous user file is selected in place of the current user file.



- 3 When the user file to be used has been selected in step 2, press the SET button. The user file is changed and stored in the memory.

<Note>

The SYSTEM menu items are not contained in user files 1 to 5. Therefore, to set the SYSTEM menu items, select the user file and switch to the SYSTEM file.

Setup Menus

The lock mode can be set to protect the settings in the system file and user files (USER2 to USER5). Once the lock mode has been set, it is no longer possible to change the settings. The setting and release of the lock mode can be performed using setup menu item No. 30 (MENU LOCK) for the system file and using setup menu item No. A03 (MENU LOCK) for the user files.

Setting and releasing the lock mode

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down to select the file for which the lock mode is to be set or released.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. 30 (MENU LOCK) for the system file or to No. A03 (MENU LOCK) for the user files.
- 4 Rotate the search dial while the search button is held down, and select whether to set or release lock mode.
Set lock: Set the setting to 0001 (ON).
Release lock: Set the setting to 0000 (OFF).

When the lock is set, "LOCKED" appears at the top of the menu screen. In addition, the counter display stops flashing and lights up.

SETUP-MENU	LOCKED
<USER2>	No.000 - 0005
*000 P-ROLL TIME	5s
001 LOCAL ENA	ST&EJ
002 TAPE TIMER	±12h
003 REMAIN SEL	OFF
004 SETUP NUMBER	OFF
007 SUPER	ON
008 DISPLAY SEL	T&STA
009 CHARA H-POS	5
010 CHARA V-POS	23

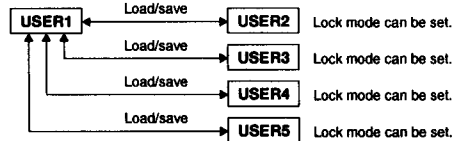
- 5 Press the SET button. The setting is now stored in the memory.

<Notes>

- The lock mode cannot be set for the USER1 file.
- Once a file has been set to the lock mode, it cannot be reset to the factory settings even when the RESET button is pressed.

Setup Menus

The contents of the USER2 to USER5 files can be copied (loaded) to the USER1 file. Alternatively, the contents of the USER1 file can be copied (saved) to the USER2 to USER5 files.



Loading a user file

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down and select USER1.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. A00 (LOAD).

```

SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
804 BLANK LINE  BLANK
*A00 LOAD      USER2
A01 SAVE       USER2
A02 P.ON LOAD  OFF
END
  
```

- 4 Rotate the search dial while the search button is held down, and select the user file which is to be loaded in USER1.
- 5 Press the SET button. The following messages now appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU LOAD

USER2 → USER1 OK?
YES<PLAY>/NO<STOP>
  
```

Counter display

```

TCR 00:00:00:00
SETUP LOAD U-2 → U-1
  
```

The number of the user file selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The settings in the user file selected in step 4 are loaded, and the USER1 menu display appears. If the STOP button is pressed instead, the USER1 menu display appears with its settings remaining unchanged.
- 7 Rotate the search dial, and move the cursor (*) on the menu screen to any item except No. A00 (LOAD) or No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If they are not going to be stored in the memory, press the MENU button instead of the SET button.

Setup Menus

Saving a user file

- 1 Press the MENU button.
- 2 Press the FF or REW button while the STANDBY button is held down and select USER1.
- 3 Rotate the search dial, and move the cursor (*) on the menu screen to No. A01 (SAVE).

```

SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
804 BLANK LINE  BLANK
A00 LOAD      USER2
*A01 SAVE       USER2
A02 P.ON LOAD  OFF
END
  
```

- 4 Rotate the search dial while the search button is held down, and select the user file in which the USER1 settings are to be saved. User files which have been set to the lock mode will not be displayed at this time. If all the user files are set to the lock mode, the "LOCKED" display appears, and the save operation cannot be performed.
- 5 Press the SET button. The following messages now appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU SAVE

USER1 → USER2 OK?
YES<PLAY>/NO<STOP>
  
```

Counter display

```

TCR 00:00:00:00
SETUP SAVE U-1 → U-2
  
```

The number of the user file selected in step 4 is displayed in the shaded area.

- 6 Press the PLAY button. The USER1 settings are saved in the user file selected in step 4. If the STOP button is pressed instead, the USER1 menu display appears with its settings remaining unchanged.
- 7 Rotate the search dial, and move the cursor (*) on the menu screen to any item except No. A00 (LOAD) or No. A01 (SAVE).
- 8 Press the SET button. The USER1 settings are now stored in the memory. If they are not going to be stored in the memory, press the MENU button instead of the SET button.

Automatically calling a user file when the power is turned on

If the user file to be loaded is set in advance using setup menu item No. A02 (P.ON LOAD), the file will be loaded into USER1 automatically when the power is turned on.

Setup (Setting) Menus

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	WFM SEL	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015	CTL TC VIDEO SYNC RF_L1 RF_L2 RF_R1 RF_R2 RF_DL RF_DR ENV_L1 ENV_L2 ENV_R1 ENV_R2 ENV_DL ENV_DR	This enables various signals to be output from the VIDEO OUT2 output connector. 0: The CTL signal is output. 1: The time code signal is output. 2: The video output signal is output. 3: The sync signal is output. 4: The PB L13ch RF signal is output. 5: The PB L24ch RF signal is output. 6: The PB R13ch RF signal is output. 7: The PB R24ch RF signal is output. 8: The DV L12ch RF signal is output. 9: The DV R12ch RF signal is output. 10: The PB L13ch ENV signal is output. 11: The PB L24ch ENV signal is output. 12: The PB R13ch ENV signal is output. 13: The PB R24ch ENV signal is output. 14: The DV L12ch ENV signal is output. 15: The DV R12ch ENV signal is output.
11	SYS SC	0000 0127 0255	-127 0 128	System phase adjustment: total variable range = more than $\pm 180^\circ$ -: Advanced +: Delayed <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
12	SYS H	0000 0108 0216	-108 0 108	System phase adjustment: 74 nsec steps -: Advanced +: Delayed <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
13	VIDEO PHASE	0000 0032 0064	-32 0 32	Video phase adjustment: 148 nsec steps -: Advanced +: Delayed
14	SCH COARSE	0000 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90° increments -: Advanced +: Delayed (The SC phase changes; the H phase does not change.)
15	SCH FINE	0000 0032 0064	-32 0 32	CH phase adjustment: total variable range = more than $\pm 45^\circ$ (The SC phase changes; the H phase does not change.)
16	AV PHASE	0000 0100 0200	-100 0 100	This adjusts the phase of the audio output in relation to the video output phase: 20.8 μ sec steps. -: The audio output phase advances ahead of the video output phase. +: The audio output phase lags behind the video output phase.

"_" denotes the factory setting.

Setup (Setting) Menus

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
17	SYS H RANGE	0000 0001	FULL FINE	This selects the variable range for SYSTEM H when the ENCODER REMOTE connector is connected. 0: $\pm 8 \mu$ sec 1: -2 to $+2.7 \mu$ sec <Notes> • The setting will remain unchanged even if an operation is performed to restore the factory setting. • The FULL operation results regardless of this item's setting if SYSTEM H is varied using this unit instead of using the encoder remote controller.
18	SYS H OFFSET	0000 0001 0002 0003 0004 0005 0006	-3 -2 -1 0 1 2 3	System phase adjustment 0: -13.4μ sec 1: -8.96μ sec 2: -4.52μ sec 3: 0 sec 4: $+4.52 \mu$ sec 5: $+8.96 \mu$ sec 6: $+13.4 \mu$ sec <Note> The setting will remain unchanged even if an operation is performed to restore the factory setting.
19	SYS SC/H	0000 0001	REMOTE LOCAL	This sets whether the system phase is to be adjusted by the unit or from the external encoder remote controller. 0: The system phase is adjusted from the external encoder remote controller. 1: The system phase is adjusted by the unit. <Note> This setting does not take effect when the ENCODER CONTROL switch at the bottom of the front panel is set to LOCAL.
30	MENU LOCK	0000 0001	OFF ON	This selects whether the lock mode is to be set or released for the system file. 0: Lock is released (changes can be made). 1: Lock is set (no changes can be made). <Note> Setup menu item No. 00 (WFM SEL) can be changed at any time regardless of the setting of this menu item.

"_" denotes the factory setting.

Video output signal adjustments

The video output signal adjustments are made using the ENCODER CONTROL switch at the bottom of the front panel and the SYSTEM menu item No. 19 (SYS SC/H) setting. A control matrix of the adjustments is shown below.

Setting		Adjustment item		
ENCODER CONTROL switch	SYSTEM menu item 19: SYS SC/H	SYSTEM menu item 11: SYS SC 12: SYS H	SYSTEM menu item 17: SYS H RANGE	VIDEO LEVEL CHROMA LEVEL BLACK LEVEL CHROMA PHASE
	LOCAL	Unit	Always FULL regardless of setting	Unit
REMOTE	LOCAL	Unit		External encoder remote controller
	REMOTE	External encoder remote controller	FULL/FINE	

Setup menus

USER menus

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ... 0005 ... 0015	0S ... 5S ... 15S	This sets the time for the preroll which is initiated by the PREROLL button. It can be set from 0 to 15 seconds in 1-second increments.
001	LOCAL ENA	0000 0001 0002	DIS ST&EJ ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All the buttons can be operated.
002	TAPE TIMER	0000 0001	±12h 24h	This selects the 12- or 24-hour display for the CTL counter. 0: 12-hour display 1: 24-hour display
003	REMAIN SEL	0000 0001	OFF ON	This selects whether to indicate the remaining tape time (REMAIN) on the front panel display and the superimposed display at the VIDEO OUT 3/SERIAL OUT 3 connectors. 0: Remaining tape time is not displayed. 1: Remaining tape time is displayed. <Notes> • The remaining tape time is indicated at the far right of the second digit on the front panel display and superimposed display. • Even when 1 (ON) has been selected, the remaining tape time is not displayed while it is being calculated after the cassette has been ejected or inserted. • When TIME has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the time is not indicated on the superimposed display. • No display appears if the freeze mark (F) is indicated by the setup menu item No. 111 (FRZ MODE SEL) setting. • No display appears if the tape start or end is sensed and BOT or EOT is displayed.
004	SETUP NUMBER	0000 0001	OFF ON	This selects whether the SETUP MENU No. is to be displayed on the front panel. 0: The SETUP MENU No. is not displayed. 1: The SETUP MENU No. is displayed.
007	SUPER	0000 0001	OFF ON	This selects whether the time code and other superimposed displays are to be shown at the VIDEO OUT 3/SERIAL OUT 3 connector. 0: Superimposed displays are not shown. 1: Superimposed displays are shown.

"_" denotes the factory setting.

Setup menus

USER menus

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
008	DISPLAY SEL	0000 0001 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This selects what information is to be provided by the time code and other superimposed displays at the VIDEO OUT 3/ SERIAL OUT 3 connector. 0: Time only 1: Time and operating mode 2: Time, operating mode and mode 3: Time and REC TIME 4: Time and REC DATE (year/month/day) 5: Time and REC DATE (month/day/year) 6: Time and REC DATE (day/month/year) <Notes> 1. Displayed as the mode is DVCPRO_50 for the DVCPRO50 (50 Mbps) format, DVCPRO for the DVCPRO (25 Mbps) format or DV for the DV format. 2. An error message appears if a warning or error has occurred when 2 (T&S&M) has been selected as this setting. 3. REC TIME and REC DATE are displayed during DV playback only. With the DVCPRO50 (50 Mbps) or DVCPRO (25 Mbps) format, the operating mode is displayed.
009	CHARA H-POS	0000 ... 0004 ... 0015	0 ... 4 ... 15	This sets the horizontal position of the characters for the time code and other superimposed displays of the VIDEO OUT 3/ SERIAL OUT 3 connector. <Note> When this item is set, the time code and other superimposed displays are output to VIDEO OUT 3/SERIAL OUT 3 in the DISPLAY SEL status even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Furthermore, CHARA TYPE as set in the menu is output to VIDEO OUT 3/SERIAL OUT 3.
010	CHARA V-POS	625 mode 0000 ... 0023 ... 0028 525 mode 0000 ... 0018 ... 0022	0 ... 23 ... 28 0 ... 18 ... 22	This sets the vertical position of the characters for the time code and other superimposed displays of the VIDEO OUT 3/ SERIAL OUT 3 connector. <Notes> 1. When this item is set, the time code and other superimposed displays are output to VIDEO OUT 3/SERIAL OUT 3 in the DISPLAY SEL status even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting is changed in such a way that the characters are automatically displayed at a position where they are contained within the screen.

"_" denotes the factory setting.

Setup menus

USER menus

<BASIC> (continued)

Item No.	Superimposed display	Setting		Description
		No.	Superimposed display	
011	CHARA TYPE	0000 0001	WHITE W/OUT	This selects the display type for the superimposed displays of the VIDEO OUT 3/SERIAL OUT 3 connector, the setup menus, etc. 0: White characters against a black background 1: White characters with a black border
012	SYS FORMAT	0000 0001	50M 25M	This sets the playback format. 0: The DVCPRO50 (50 Mbps) format is selected. 1: The DVCPRO (25 Mbps) format is selected.
013	PB FORMAT	0000 0001	MANUAL AUTO	This sets the tape playback format. 0: The format complies with the setup menu item No. 012 (SYS FORMAT) setting. 1: The format complies with the format recorded on the tape when the DVCPRO mode has been selected as the setup menu item No. 014 (FORMAT SEL) setting. <Note> There is no automatic setting in the 625/525 mode.
014	FORMAT SEL	0000 0001	DVCPRO DV	This selects the format when an L size cassette is used. 0: DVCPRO (50 Mbps, 25 Mbps) mode 1: DV mode <Notes> Bear in mind that the following problems may arise over and above trouble with playback if a tape with a different format from the one selected is inserted. 1. The remaining tape time will not be displayed accurately. 2. The slow-down positions near the tape start and end will not be located accurately. 3. In addition, no guarantees are given for performance, etc. if a tape with a different format from the one selected is inserted.
016	CU-ROLL TIME	0000 : 0015	0s : 15s	This sets the time for the preroll which is initiated by the CUE UP button. It can be set from 0 to 15 seconds in 1-second increments.

"_" denotes the factory setting.

Setup menus

USER menus

<OPERATION>

Item No.	Superimposed display	Setting		Description
		No.	Superimposed display	
100	SEARCH ENA	0000 0001	DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 0001 0002	×8.4 ×16 ×32	This sets the maximum speed for shuttle operations. 0: 8.4× (7.0×) normal speed 1: 16× normal speed 2: 32× normal speed <Note> The values for the DV format are shown in parentheses.
102	FF. REW MAX	0000 0001 0002	×16 ×32 ×50	This sets the maximum speed for FF and REW operations. 0: 16× (32×) normal speed 1: 32× (60×) normal speed 2: 50× (100×) normal speed <Notes> • The values for the DVCPRO (25 Mbps) format are shown in parentheses. • With the DV format, the maximum speed is set to 32× regardless of this item's settings.
103	AUDIO MUTE	0000 0001	OFF ON	This sets the status that is established until the audio signals are output when operation is transferred from the STOP or search mode to PLAY. 0: The time until the sound is output is shortened. 1: The sound is output only after the status transfer is completed. <Note> When this item is set to 0, the sound in the part which is output at the beginning will be imperfect. Therefore, this setting is not recommended for use with broadcasts.
104	REF ALARM	0000 0001	OFF ON	This selects whether to display a warning for the operator when the REF.VIDEO signal has not been connected. 0: A warning is not displayed. 1: A warning is displayed in the form of a flashing STOP lamp.
107	PLAY DELAY	0000 : 0015	0 : 15	This sets the play startup time in frame increments.
108	CAP. LOCK	0000 0001	4F 8F	This selects the CAPSTAN LOCK mode when the CF switch has been set to 4F or 8F. 0: 4F mode 1: 8F mode <Note> This setup menu item is not displayed in the 525 mode.
109	AUTO REW	0000 0001	OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end has been detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.

"_" denotes the factory setting.

Setup menus

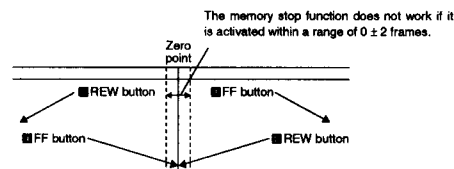
USER menus

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
110	MEMORY STOP	0000 0001	OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during fast forwarding or rewinding in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. <Notes> 1. The stop mode concerned is either the stop or still-picture (SHTL STILL) mode depending on the setup menu item No. 315 (AFTER CUE-UP) setting. 2. When the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.
111	FRZ MODE SEL	0000 0001 0002	DIS STBOFF SOF&EJ	This selects the image which is to be output in the STANDBY OFF (HALF LOADING) mode and EJECT mode. 0: The video output is muted. 1: In the STANDBY OFF (HALF LOADING) mode only, the playback picture corresponding to the point in time when the STANDBY OFF mode was established is frozen and output. 2: In the STANDBY OFF (HALF LOADING) and EJECT mode, the playback picture corresponding to the point in time when the mode was established is frozen and output. <Note> The mode of field freeze is used when the playback picture is frozen.

"_" denotes the factory setting.

Description of memory stop function



- When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.
- When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp also lights), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0".
- When the REW button is pressed, the VTR performs the regular rewind operation since the zero point is not located in the direction of operation.
- When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp also lights), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0".

Setup menus

USER menus

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	0000 0001	DIS ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: The VTRs are not operated in synchronization. 1: The VTRs are operated in synchronization. <Note> When the VTRs are to be operated in synchronization, set item 200 to "1" for all the VTRs.
201	9P SEL	0000 0001	OFF ON	This selects whether the 9P connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The 9P connector does not function. 1: The 9P connector functions.
202	ID SEL	0000 0001	OTHER DVCPRO	This selects the ID information which is returned to the controller. 0: 21 25H in the 625 mode; 20 25H in the 525 mode 1: ID inherent to DVCPRO F1 33H in the 625 mode; F0 33H in the 525 mode
203	25P SEL	0000 0001	OFF ON	This selects whether the PARALLEL (25P) connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The 25P connector does not function. 1: The 25P connector functions.
204	RS232C SEL	0000 0001	OFF ON	This selects whether the RS-232C connector is to function when the REMOTE/LOCAL switch has been set to REMOTE. 0: The RS-232C connector does not function. 1: The RS-232C connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 0005	300 600 1200 2400 4800 9600	This sets the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 0001	7 8	This sets the RS-232C data length (unit: bit).
207	STOP BIT	0000 0001	1 2	This sets the RS-232C stop bit length (unit: bit).
208	PARITY	0000 0001 0002	NON ODD EVEN	This sets none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. (None) 1: An odd number of bits is used for the parity. (Odd) 2: An even number of bits is used for the parity. (Even)
209	RETURN ACK	0000 0001	OFF ON	For selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	0000 0001	OFF/ON ON	This selects the method used in connection with detecting the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time an active signal is detected, the mode is switched from STANDBY ON to STANDBY OFF or vice versa. 1: When an active signal is detected in the STANDBY OFF mode, operation is transferred to the STANDBY ON mode. This setting has no effect on operation while the unit is in the STANDBY ON mode.

"_" denotes the factory setting.

Setup menus

USER menus

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
315	AFTER CUE-UP	0000 0001	STOP STILL	This selects the unit's mode upon completion of the cue-up operation. 0: The unit is set to the stop mode. 1: The unit is set to the still-picture (SHTL STILL) mode.
319	VAR STEP	0000 0001	FINE COARSE	This selects the VAR speed above $\pm 1\times$ for remote control operations. 0: The tape is played at a speed which can be varied in fine steps. 1: The tape is played at a speed which can be varied in coarse steps. <Note> Phase synchronization from the editing controller is not possible at the "1" (COARSE) setting.
320	VAR FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum VAR FWD speed. 0: DVCPRO50 (50 Mbps) = $+4.1\times$ normal speed DVCPRO (25 Mbps) = $+4.1\times$ normal speed DV = $+3.1\times$ normal speed 1: DVCPRO50 (50 Mbps) = $+1.85\times$ normal speed DVCPRO (25 Mbps) = $+2\times$ normal speed DV = $+1.85\times$ normal speed 2: $+1\times$ normal speed <Note> Phase synchronization from the editing controller is not possible at a setting other than "0" (+4.1).
321	VAR REV MAX	0000 0001 0002	-4.1 -1.85 -1	This sets the maximum VAR REV speed. 0: DVCPRO50 (50 Mbps) = $-4.1\times$ normal speed DVCPRO (25 Mbps) = $-4.1\times$ normal speed DV = $-3.1\times$ normal speed 1: DVCPRO50 (50 Mbps) = $-1.85\times$ normal speed DVCPRO (25 Mbps) = $-2\times$ normal speed DV = $-1.85\times$ normal speed 2: $-1\times$ normal speed <Note> Phase synchronization from the editing controller is not possible at a setting other than "0" (-4.1).
322	JOG STEP	0000 0001	FINE COARSE	This selects the JOG speed during remote control operations. 0: The tape is played at a speed which can be varied in fine steps. 1: The tape is played at a speed which can be varied in coarse steps. <Note> Phase synchronization from the editing controller, which synchronizes the phase using the JOG command, is not possible at the "1" (COARSE) setting.
323	JOG FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum JOG FWD speed. 0: DVCPRO50 (50 Mbps) = $+4.1\times$ normal speed DVCPRO (25 Mbps) = $+4.1\times$ normal speed DV = $+3.1\times$ normal speed 1: DVCPRO50 (50 Mbps) = $+1.85\times$ normal speed DVCPRO (25 Mbps) = $+2\times$ normal speed DV = $+1.85\times$ normal speed 2: $+1\times$ normal speed <Notes> • When the dial is operated on the front panel, the maximum playback speed is $+1\times$ normal speed for the DVCPRO50 (50 Mbps) and DV formats. With the DVCPRO (25 Mbps) format, it is $+2\times$ normal speed at "0" or "1" and $+1\times$ normal speed at "2" depending on the menu setting. • Phase synchronization from the editing controller, which synchronizes the phase using the JOG command, is not possible at a setting other than "0" (+4.1).

"_" denotes the factory setting. 44 (E)

Setup menus

USER menus

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
324	JOG REV MAX	0000 0001 0002	-4.1 -1.85 -1	This sets the maximum JOG REV speed. 0: DVCPRO50 (50 Mbps) = $-4.1\times$ normal speed DVCPRO (25 Mbps) = $-4.1\times$ normal speed DV = $-3.1\times$ normal speed 1: DVCPRO50 (50 Mbps) = $-1.85\times$ normal speed DVCPRO (25 Mbps) = $-2\times$ normal speed DV = $-1.85\times$ normal speed 2: $-1\times$ normal speed <Notes> • When the dial is operated on the front panel, the maximum speed is $-1\times$ normal speed for the DVCPRO50 (50 Mbps) and DV formats. With the DVCPRO (25 Mbps) format, it is $-2\times$ normal speed at "0" or "1" and $-1\times$ normal speed at "2" depending on the menu setting. • Phase synchronization from the editing controller which synchronizes the phase using the JOG command is not possible when a setting other than 0 (-4.1) is used.

"_" denotes the factory setting.

45 (E)

Setup menus

USER menus

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000	0.5s	This selects the time taken until the tape protection mode is established when the unit has been left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) <Note> When a DV tape for general consumer applications is used, any setting above 10 seconds will be treated as 10 seconds. However, the selection screen will show operations up to 2 minutes.
		0001	5s	
		0002	10s	
		0003	20s	
		0004	30s	
		0005	40s	
		0006	50s	
		0007	1min	
401	SRC PROTECT	0000	STEP	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the search STILL (JOG/VAR/SHTL) mode, the unit automatically enters a tape protection mode. This menu item is for selecting which tape protection mode is to be entered by the unit. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD has been selected, the STANDBY OFF (HALF LOADING) mode will automatically be established when the total time during which the unit has been left standing in the still status has reached 30 minutes (or 1 minute for a DV tape).
		0001	HALF	
402	DRUM STDBY	0000 0001	OFF ON	This selects whether the head drum is to be rotated when operation is transferred to the STANDBY OFF (HALF LOADING) mode. 0: The head drum is stopped. 1: The head drum is rotated.
403	STOP PROTECT	0000 0001	STEP HALF	When the time selected as the setup menu item No. 400 (STILL TIMER) setting elapses while the unit is in the STOP mode, the unit automatically enters a tape protection mode. This menu item is for selecting which tape protection mode is to be entered by the unit. 0: STEP FWD 1: HALF LOADING <Note> When STEP FWD has been selected, the STANDBY OFF (HALF LOADING) mode will automatically be established when the total time during which the unit has been left standing in the stop status has reached 30 minutes (or 1 minute for a DV tape).

"_" denotes the factory setting.

<Precaution for STILL TIMER setting>

The cumulative standby time at the same position increases when programmes are transmitted or at other times when the same material is used repeatedly, etc.

Setup menus

USER menus

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC BLANK	0000 0001	BLANK THRU	This selects whether to output the VITC data to the positions selected by VITC POS-1 in 501 and VITC POS-2 in 502. 0: The data is not output. 1: The data is output.
501	VITC POS-1	625 mode		This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-2 in 502 cannot be selected.)
		0000	7L	
		0004	11L	
		0015	22L	
		525 mode		
		0000	10L	
		0006	16L	
		0010	20L	
		625 mode		
		0000	7L	
502	VITC POS-2	0006	13L	This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-1 in 501 cannot be selected.)
		0015	22L	
		525 mode		
		0000	10L	
		0006	16L	
		0010	20L	
		625 mode		
		0000	7L	
		0006	13L	
		0015	22L	
507	PHASE CORR	0000 0001	OFF ON	This selects whether to control the phase correction of the LTC output during playback. 0: Phase correction control is not performed. 1: Phase correction control is performed.
509	DF MODE	0000 0001	DF NDF	This selects the DF or NDF mode for CTL. 0: Drop frame mode 1: Non-drop frame mode <Notes> • This item is valid when the unit is in the LOCAL mode or when "ENA" is selected as the menu setup item No. 001 (LOCAL ENA). • This setup menu item is not displayed in the 625 mode.
511	VITC OUT	0000 0001	SBC VAUX	This selects the method of outputting VITC which is superimposed onto the video output signals. SBC: The time code recorded in the SBC area is output as the VITC. VAUX: The time code recorded in the VAUX area is output as the VITC.

"_" denotes the factory setting.

SBC (Sub Code Data) area

This area is separate from the video and audio data area on the helical track. It is used to store the time codes complying with the SMPTE/EBU standard. As with the conventional linear time code (LTC), the time code can be read even during rewinding or fast forwarding. It can also be read when the tape has stopped.

VAUX (Video Auxiliary Data) area

This area is located in the video data area on the helical track. It is used to store the auxiliary data relating to the video data.

<Note>

Control over the time code and user bit during tape play is exercised using the data recorded in the SBC area. In other words, data recorded in the SBC area is used as the source of the data which is displayed or superimposed or the data which is sent to the editing controller.

Setup menus

USER menus

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
602	V-MUTE SEL	0000 0001	N-MUTE LOW RE	This selects whether the video output signal is to be muted when a blank part of the tape has been detected during playback. 0: The video signal is not muted (it is frozen). 1: The video signal is muted (it is turned to gray).
603	CC (F1) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed caption signal in the first field. 0: The signal is forcibly blanked. 1: The signal is not forcibly blanked. <Note> This setup menu item is not displayed in the 625 mode.
604	CC (F2) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed caption signal in the second field. 0: The signal is forcibly blanked. 1: The signal is not forcibly blanked. <Note> This setup menu item is not displayed in the 625 mode.
605	FREEZE SEL	0000 0001	FIELD FRAME	This selects the freeze mode for still pictures. 0: Field freeze 1: Frame freeze <Note> When frame freeze has been selected, the frame slow status is established in the slow-motion mode.
606	OUT C KILL	0000 0001	B/W COLOR	This selects the chroma colour killer processing for the video output signals. 0: The signals are forcibly processed as black-and-white signals. 1: The signals are automatically processed.
609	EDH	0000 0001	OFF ON	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed.
614	Pb/Pr OUT LV	0000 0001	MII B-CAM	This selects the analogue component output level. 0: MII level 1: Betacam level <Note> This setup menu item is not displayed in the 625 mode.
618	INTER-POLATE	0000 0001	OFF AUTO	During slow-motion playback, vertical interpolation is performed automatically to reduce the up and down movement of the playback picture. However, this setting can be used to forcibly turn off this interpolation. 0: The interpolation is forcibly turned off. 1: The interpolation is automatically turned on during slow-motion playback.
620	ESR MODE	0000 0001	OFF AUTO	This selects the operation mode of the edge subcarrier reduction (ESR) in the playback circuit. 0: ESR is forcibly turned off. 1: ESR is automatically turned on or off depending on the VTR operation.
621	CCR MODE	0000 0001	OFF ON	This selects the cross-colour processing during playback. 0: The signals which are output remain unchanged. 1: Cross-colour can be reduced. <Note> This setup menu item is not displayed in the 625 mode.

"_" denotes the factory setting.

Setup menus

USER menus

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
706*	CH1 OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio output (CH1) reference level switching.
707*	CH2 OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio output (CH2) reference level switching.
708*	CH3 OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio output (CH3) reference level switching.
709*	CH4 OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio output (CH4) reference level switching.
710*	CUE OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the cue output reference level switching.
711*	MONIL OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio monitor output (Lch) reference level switching.
712*	MONIR OUT LV	0000 0001 0002	4dB 0dB -20dB	This selects the audio monitor output (Rch) reference level switching.
713	MONI OUT	0000 0001	UNITY VAR	This selects the audio monitor output UNITY/VARIABLE reference level switching. 0: The volume is output in the form of the preset value. 1: The volume is linked with the headphones volume control.
721	MONI CH SEL	0000 0001 0002	MANU AUTO1 AUTO2	This selects the monitor output. 0: The signals selected by the MONITOR SELECT switches are output. 1: PCM audio signals are output over a -1 to +1 (-2 to +2) range; otherwise, the cue signals are automatically output. 2: PCM audio signals are output in the play mode; otherwise, the cue signals are automatically output. <Notes> • This menu item setting is valid when the L and R MONITOR SELECT switches on the front panel are set to CH1, CH2, CH3 or CH4. (If CUE is selected, the cue signal will be output at all speeds regardless of the menu item setting.) • The speed applying for the DVCPRO (25 Mbps) format is given inside the parentheses.
727	PB FADE	0000 0001 0002	AUTO CUT FADE	This selects the processing method for the audio edit points (IN and OUT points) during playback. 0: The processing complies with the status established during recording. 1: Forced CUT 2: Forced FADE
728	EMBEDDED AUD	0000 0001	OFF ON	This selects whether to superimpose the audio data onto the serial output. 0: The data is not superimposed. 1: The data is superimposed.

"_" denotes the factory setting.

* EG model is fixed to -3 dBu.

Setup menus

USER menus

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
729	MONITOR MIX L	.0000 0001 0002	___OFF CH1+2 CH3+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing 1: The CH1 and CH2 signals are mixed and output to the left channel. 2: The CH3 and CH4 signals are mixed and output to the left channel.
730	MONITOR MIX R	.0000 0001 0002	___OFF CH1+2 CH3+4	This makes it possible to select mixed signals for the monitor output. 0: No mixing 1: The CH1 and CH2 signals are mixed and output to the right channel. 2: The CH3 and CH4 signals are mixed and output to the right channel.
731	CUE OUT SEL	.0000 0001	___OFF ON	This selects whether the cue signal is to be output to the main line output in the search mode. 0: The cue signal is not output. 1: The cue signal is output. (However, this applies only when setup menu item No. 721 (MONI CH SEL) is not set to MANU.)
732	CUE SLOW	.0000 0001	___STEP LINEAR	This selects the tape travel status (cue track playback status) during the slow-motion playback. 0: The output picture takes precedence, and the tape is advanced in steps. 1: Cue track playback takes precedence and the tape travels linearly. -Notes- When "1" (LINEAR) has been selected: • The image may not appear as clearly as in the STEP mode. • The CTL counter may not operate normally.
734	MONI SEL INH	.0000 0001 0002	___OFF ON ON1	This enables or disables the operation of the MONITOR SELECT switches on the front panel. 0: Operation is enabled. 1: Operation is disabled. 2: Operation is disabled in the FULL display mode; it is enabled in the FINE display mode only.
750	DV PB ATT	.0000 0001	OFF ___ON	This selects the audio output level during DV playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced).
751	REC PT MUTE	.0000 0001	___OFF ON	This selects whether to mute the sound where recordings are joined during DV playback. 0: The sound is not muted. 1: The sound is muted.

"_" denotes the factory setting.

Setup menus

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
804	BLANK LINE	.0000 0001 0002	___BLANK THRU MANU	This sets the blanking to ON or OFF for the lines in the vertical blanking period of the video output signals. 0: All the lines are forcibly blanked. 1: None of the lines are blanked. 2: Blanking is set ON or OFF for each line. -Note- When "2" (MANU) is selected, operation transfers to the sub screen when the STOP button is pressed, and ON or OFF can be selected for each line. To return from the sub screen, press the STOP button again.
Sub-screen				
625 mode				
00	LINE 7&320	.0000 0001	___BLANK THRU	0: The line is forcibly blanked. 1: The line is blanked.
:	:			
15	22&335			
525 mode				
00	LINE 10&273	.0000 0001	___BLANK THRU	0: The line is forcibly blanked. 1: The line is blanked.
:	:			
11	21&284			

"_" denotes the factory setting.

Setup menus

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	0000 0001 0002 0003	USER2 USER3 USER4 USER5	This selects the user file whose settings are to be loaded into USER1. 0: The contents of the USER2 file are loaded. 1: The contents of the USER3 file are loaded. 2: The contents of the USER4 file are loaded. 3: The contents of the USER5 file are loaded. <Note> When the SET button is pressed upon completion of the loading, the settings in the file are stored in the memory. If the MENU is pressed instead, the settings will not be changed.
A01	SAVE	0000 0001 0002 0003 0004	USER2 USER3 USER4 USER5 LOCKED	This selects the user file in which the USER1 settings are to be saved. 0: The USER1 settings are to be saved in the USER2 file. 1: The USER1 settings are to be saved in the USER3 file. 2: The USER1 settings are to be saved in the USER4 file. 3: The USER1 settings are to be saved in the USER5 file. 4: The "LOCKED" display appears when the change prohibit status has been established for all the files. <Notes> • A user file for which change prohibit is set cannot be selected. • When the change prohibit status has been established for all the files, the "LOCKED" display appears, and the saving operation cannot be performed.
A02	P.ON LOAD	0000 0001 0002 0003 0004	OFF USER2 USER3 USER4 USER5	This selects the user file whose settings are to be loaded into USER1 when the power is turned on so that the unit will start up with these settings. 0: The unit is started up with the settings in the user file which was previously set. 1: The settings of USER2 are loaded in USER1 and the unit starts with these settings. 2: The settings of USER3 are loaded in USER1 and the unit starts with these settings. 3: The settings of USER4 are loaded in USER1 and the unit starts with these settings. 4: The settings of USER5 are loaded in USER1 and the unit starts with these settings.
A03	MENU LOCK	0000 0001	OFF ON	This selects whether the lock mode is to be set or released for the user files (USER2 to USER5). 0: The lock is released (changes to the files can be made). 1: The lock is set (no changes to the files can be made). <Note> The lock cannot be set for USER1.

"_" denotes the factory setting.

<Notes>

- Menu items No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) can be set for the USER1 file only. They will not appear for the USER2 to USER5 files.
- Menu item No. A03 (MENU LOCK) can be set for the USER2 to USER5 files only. It will not appear for the USER1 files.

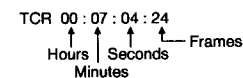
Time Code/User Bit

Time code

The time codes are used when their values are to be read by the time code reader (time code signal reader) and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time codes are written in the sub-code area (data area) of the helical track. They enable the VTR's playback speed to be read from the stop mode to slow-motion playback up to high-speed speed play (approx. 50× normal speed or approx. 100× when a DVCPRO tape is used).

The time code values are shown on the display or superimposed.



User bit

The "user bit" refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users.

Time Code/User Bit Playback

- 1 Set the unit to the stop mode.
- 2 Set the TC/CTL switch to TC.
- 3 Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
 • When it is no longer possible to read the time code, it is interpolated using the CTL signal.
- 4 Press the PLAY button.
 Playback now commences, and the time code appears on the display.
 When "ON" has been selected as the setup menu item No. 007 (SUPER), the time code value is superimposed onto the video signal from the VIDEO OUT 3 connector.

<Notes>

- The colon between the seconds and frames changes to a period when the drop frame time code is read. (In the 525 mode only.)
- When the time code signal is missing, it is automatically compensated for using the CTL signal. In this case, the following display appears.

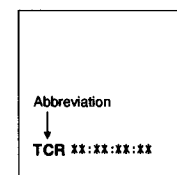
T * R 00:01:04:07

When the time code signal is missing, an asterisk (*) appears here.

The colon between the seconds and frames changes to a period in the drop frame mode. (In the 525 mode only.)

Superimpose Screen

The control signals, time code, etc. are displayed using abbreviations.

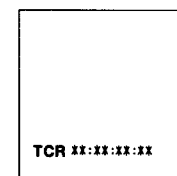


TV monitor

CTL = control signal
 TCR = TC time code reading
 UBR = TC user bit reading

Characters displayed

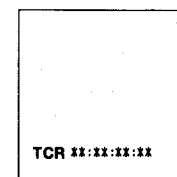
The background of the characters superimposed on the display can be changed using setup menu item No. 011 (CHARA TYPE).



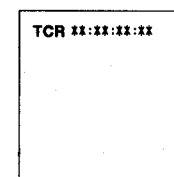
TV monitor

Display position

The position of the characters superimposed on the display can be changed using setup menu items No. 009 (CHARA H-POS) and No. 010 (CHARA V-POS).



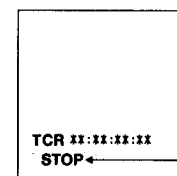
TV monitor



TV monitor

Operation mode

The VTR's operation mode can also be displayed using setup menu item No. 008 (DISPLAY SEL).

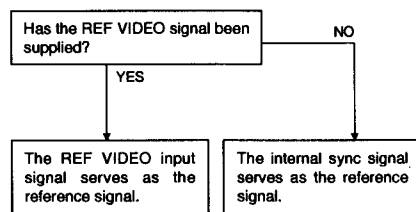


TV monitor

VTR's operation mode

Servo Reference

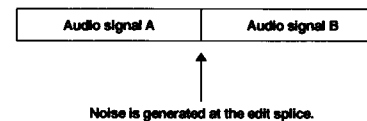
This unit automatically selects the reference video signal which is supplied from the REF VIDEO input connector or the internal sync signal (INT) as the servo reference signal. When the signal is selected, the unit's mode and servo reference setting stand in the relationship shown in the flowchart presented below.



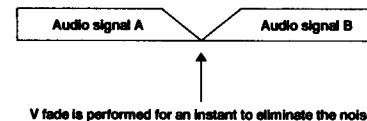
Audio V Fade Function

When a tape is edited, the information on the edit point splicing method selected is recorded on the tape. This information is therefore sensed when the tape is inserted and played back, and V fade or cut processing is automatically performed for these sections [but only when "AUTO" has been set as the playback fade selection (setup menu item No. 727)].

When "CUT" is set as the edit point splicing method



When "FADE" is set as the edit point splicing method



<Notes>

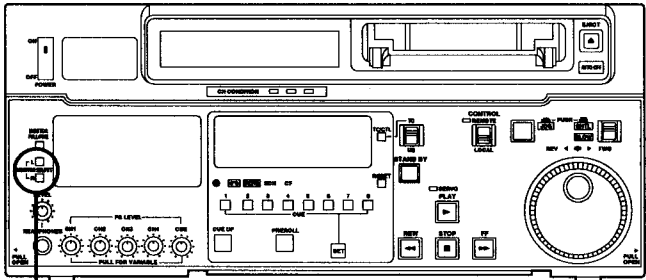
- When "CUT" is set as the edit point splicing method (setup menu item No. 727), cut processing is performed for all the splices.
- When "FADE" is set as the edit point splicing method (setup menu item No. 727), V fade processing is performed for all the splices.

Selecting the Audio Monitor Output

Monitor output channels

The monitor output channels can be selected using the MONITOR SELECT switches as shown below.

Monitor output	Output signals
L	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CUE
R	CH1/CH2/CH3/CH4/CH1+CH2/CH3+CH4/CUE

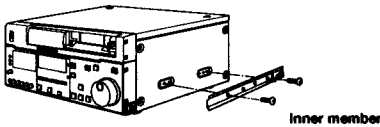


MONITOR SELECT switches

Rack Mounting

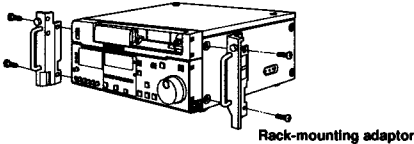
The unit can be mounted into a 19-inch standard rack if the AJ-MA75P rack-mounting adaptors (optional accessory) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3061-99-0400) of CHASSIS TRAK be used. (The complete slide rail and bracket unit is not available from Panasonic.) For further details, consult with your dealer.

- 1 Remove the screws on the left and right sides of the unit.
- 2 Use the screws which have just been removed to attach the inner members of the slide rails.

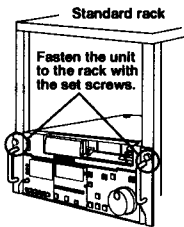


The length of the screws used is subject to restriction. If some of the mounting screws have been lost or misplaced, use screws which are less than 10 mm long in their place. Four screws must be used to secure each inner member.

- 3 Attach the outer member brackets to the rack. Check that the height is the same for the left and right brackets.
- 4 Attach the AJ-MA75P rack-mounting adaptors with the four screws supplied.



- 1 Remove the four rubber feet from the bottom of the unit, and install the unit in the rack. After the unit has been installed, check that it moves smoothly along the rails.



- <Notes>
- Keep the temperature inside the rack to between 5°C and 40°C.
 - Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video Head Cleaning

This unit has an auto head cleaning function which automatically reduces the dirt on the heads. However, to further increase the unit's reliability, it is recommended that its video heads be cleaned every day.
Use the cleaning fluid designated by Panasonic.

Condensation

Condensation forms due to the same principle involved when droplets of water form on a window pane of a heated room. This phenomenon occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from an air-conditioned location to a hot or humid location.

When moving the unit or tape to locations such as these, leave it standing for about 10 minutes instead of switching on the power immediately.

If condensation has formed on or in the unit, the AUTO OFF lamp lights, and the cassette tape is automatically ejected.

Keep the power supplied and wait until the AUTO OFF lamp goes off.

■ Maintenance

Before proceeding with maintenance, be absolutely sure to set the power switch to OFF and take hold of the power plug and unplug it from the power outlet.

Use a soft cloth to clean the cabinet. In the case of stubborn dirt, dilute some kitchen detergent, soak a cloth in the solution, wring it out well, and wipe the surfaces clean. Then wipe up the remaining moisture using a dry cloth.

- Do not insert fingers or any objects into the video cassette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the unit and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.

- Do not leave a cassette in the unit when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Do not attempt to disassemble the unit. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the unit examined for possible damage.
- Refer any needed servicing to authorized service personnel.

Error Messages

When a warning occurs in this unit, the warning lamp lights up.

Open the DIAG menu. A description of the warning will now appear on the counter display and TV monitor. In addition, if trouble has occurred in the operation of the unit, the AUTO OFF lamp lights, and a message appears on the counter display.

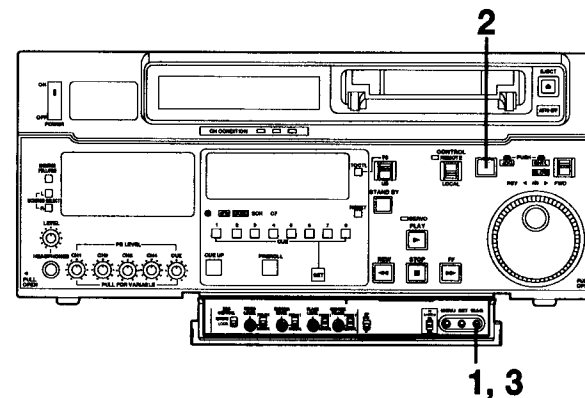
DIAG menu

This displays the VTR information.

The VTR information includes the warning information, the deck's serial number, and hour meter (usage time) information. The DIAG menu appears on the TV monitor when the TV monitor has been connected to the VIDEO OUT 3 connector on the connector panel.

Displaying the DIAG menu

- 1** Press the DIAG button.
The DIAG menu screen appears on the TV monitor, and a message appears on the counter display.
- 2** Each time the search button is pressed, the display is switched to the warning information, the deck's serial number and hour meter information in this order.
- 3** Press the DIAG button to return to the original display.



Warning information display

- A warning message appears whenever a warning occurs (the warning lamp lights). When a warning has not occurred, "NO WARNING" is displayed.
- When more than one warning has occurred, a description of each warning can be checked by turning the search dial.

Error Messages

Displaying the hour meter information

Turn the search dial to move the cursor (*), and a description of the item where the cursor is located will appear on the counter display.

Item No.	Item	Description
Ser	*****	This displays the deck's serial number.
H00	OPERATION	This displays the number of hours during which the power has been supplied in 1-hour units.
H01	DRUM RUN	This displays the number of hours during which the drum has been rotating in 1-hour units.
H02	TAPE RUN	This displays the number of hours during which the tape has travelled in the FF, REW, PLAY and SEARCH (JOG, VAR, SHTL) modes in 1-hour units.
H03	THREADING	This displays the number of times the tape has been threaded and unthreaded in 1-time units.
H11	DRUM RUN r	This displays the number of hours during which the drum has been rotating in 1-hour units. (The display can be reset.)
H12	TAPE RUN r	This displays the number of hours during which the tape has travelled in the FF, REW, PLAY and SEARCH (JOG, VAR, SHTL) modes in 1-hour units. (The display can be reset.)
H13	THREADING r	This displays the number of times the tape has been threaded and unthreaded in 1-time units. (The display can be reset.)
H30	POWER ON	This displays the number of times the power has been turned on in 1-time units.

<Notes>

- The hour meter information items which can be reset are reset by the dealer when maintenance work, etc. has been performed.
- Operations involving the search button and search dial cannot be performed while the DIAG menu is displayed.

If "T&S&M" has been selected as the setup menu item No. 008 (DISPLAY SEL) setting, the message will appear on the mode display area when a warning or error has occurred. When two or more warnings or errors have occurred, they are displayed in sequence of priority starting with the one which has the highest priority.

Priority	Display	Description
High ↑ ↓ Low	Error messages (see error message table)	When trouble has occurred in the operation of the unit, the AUTO OFF lamp lights, and an error message is displayed.
	ILLEGAL REF	When illegal signals, which are not black burst or other composite signals complying with the broadcast standards (625: CCIR624, 525: RS-170A), have been supplied to the REF VIDEO input connector, the message shown on the left may appear depending on the signal concerned. Since, in a case like this, it cannot be guaranteed that the VTR will operate properly, eject the cassette and turn off the power. <Note> The tape will not be damaged even when this message appears.
	Warning messages (see error message table)	When a warning occurs, the warning lamp lights, and a warning message is displayed. When two or more warnings have occurred, they are displayed in sequence of priority starting with the one which has the highest priority.

Warning messages

Priority	On counter display and TV monitor	Description	VTR operation
High ↑ ↓ Low	FAN STOP	This appears when the fan motor has stopped.	The VTR continues operating.
	NO RF	This appears when a blank portion of the tape lasting more than 1 second has been detected during playback. Any portion of the tape is recognized as a blank when all the following conditions are satisfied: • When no signals are output from any of the heads. • When no playback data can be read. • When there is no CTL signal (this does not apply with DV tapes for general consumer applications).	The VTR continues operating.
	SERVO NOT LOCKED	This appears when the servo is not locked for 3 or more seconds during playback.	The VTR continues operating.
	LOW RF	This appears when it has been detected that the envelope level has dropped to approximately one-third of its usual level during playback.	The VTR continues operating.
	HIGH ERROR RATE	This appears when the error rate increases, and correction or interpolation is performed for either the video or audio playback signals.	The VTR continues operating.

Error Messages (when AUTO OFF lamp lights)

On counter display	On TV monitor	Description	VTR operation (restart action)
CAP ROTATE TOO SLOW	CAP ROTA TOO SLOW	When the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
CAP TENSION ERROR	CAP TENSION ERROR	When abnormal tension is detected at the supply side in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
DEW	DEW	When condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to dry out the condensation. When the condensation has dried out, the AUTO OFF lamp goes off, the message display is cleared, and the VTR can be operated again. • When condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. • When condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	Eject
DRUM ROTATE TOO FAST	DRUM ROTA TOO FAST	When the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
DRUM ROTATE TOO SLOW	DRUM ROTA TOO SLOW	When the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
E-FF	E-FF	When the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
FRONT LOAD ERROR	FRONT LOAD ERROR	When the take-up reel has been rotating without taking up the tape for a specific period of time while the start or end processing operation during loading (half position) is being performed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
FRONT LOAD MOTOR	FRONT LOAD MOTOR	When the cassette fails to move up even when 6 seconds have elapsed after the eject mode was established, the AUTO OFF lamp lights, and the message display flashes. <Note> When the cassette fails to move down even when 6 seconds have elapsed after the cassette was inserted, the eject mode is established.	Stop (power OFF → ON)
LOADING MOTOR	LOADING MOTOR	When the unloading operation fails to be completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. <Note> When the loading operations fails to be completed within 6 seconds, the eject mode (unloading mode) is established.	Stop (power OFF → ON)
REEL DIR UNMATCH	REEL DIR UNMATCH	When the take-up reel motor is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)

Error Messages (when AUTO OFF lamp lights)

On counter display	On TV monitor	Description	VTR operation (restart action)
REEL TENSION ERROR	REEL TENSION ERROR	When abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
SERVO COMM ERROR	SERVO COMM ERROR	When the servo microcomputer does not follow the instructions of the system control microcomputer even after 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
SERVO CONTROL ERROR	SERVO CONTROL ERR	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
SERVO ERROR	SERVO ERROR	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
S-FF/REW TIMEOVER	S-FF/REW TIMEOVER	When the start or end processing operation fails to be completed, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
S REEL ROTA TOO FAST	S REEL TOO FAST	When the supply reel motor rotates at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
S REEL TORQUE ERROR	S REEL TORQUE ERR	When an abnormal torque applied to the supply reel motor is detected or an abnormal current flowing to the current-sensing resistor is detected, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
T REEL ROTA TOO FAST	T REEL TOO FAST	When the take-up reel motor rotates at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
T REEL TORQUE ERROR	T REEL TORQUE ERR	When an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
UNLOAD ERROR	UNLOAD ERROR	When the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
WINDUP ERROR	WINDUP ERROR	If, after the total tape amount has been detected, the amount of tape wound up on the take-up reel and the amount of tape supplied by the supply reel differ to an abnormal extent while the tape is travelling, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)
WINDUP REEL NOT ROTA	W-UP REEL NOT ROTA	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape while the total tape amount is not detected and while the tape is travelling, the AUTO OFF lamp lights, and the message display flashes.	Stop (power OFF → ON)

RS-232C Interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232 interface is used.
(See command tables on pages 68 to 70.)

(2) Conditions for acknowledging commands from the RS-232C interface.
The front panel REMOTE/LOCAL switch must be set to REMOTE.
The setup menu item No. 204 (RS232C SEL) must be set to ON.

If the above conditions are not met, [ACK] + [STX] ER001 [ETX] is returned to the external unit.
Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 (RETURN ACK).

2. Hardware specifications

External interface specifications

(1) Connector specifications

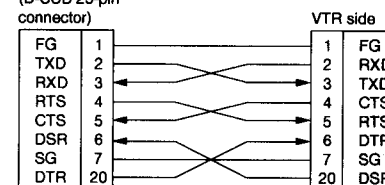
Connector: D-SUB 25-pin (crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	Not processed
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

(2) Example of connections with controller (PC)

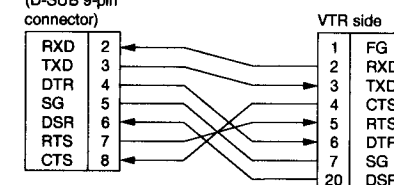
(Using crossover cable with D-SUB 25-pin connectors)

PC side
(D-SUB 25-pin connector)



(Using crossover cable with D-SUB 9-pin and 25-pin connectors)

PC side
(D-SUB 9-pin connector)



RS-232C Interface

3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Baud rate	300, 600, 1200, 2400, 4800, <u>9600</u> bps
Data length	7 bits or <u>8 bits</u>
Stop bit	<u>1 bit</u> or 2 bits
Parity bit	<u>None</u> , odd or even
ACK code	ACK code <u>returned</u> or not returned <Note> The ACK code is what is returned from the VTR to the controller when data has been sent successfully from the controller.

"_" denotes the factory setting.

Changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication system	No. 205 BAUD RATE
Data length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]
02h XX XX XX 3Ah XX-XX 03h ← (ASCII code: symbols, numbers, upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: The colon serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of procedure for sending data from controller

- The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows, and the data is added as required. The format ends with ETX (end of text = 03h).
- When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 67)
- If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX, which was received again, at the head.

RS-232C Interface

(3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response may be made.

■ When the communication has terminated normally

- The receive completion message is returned.

[ACK]
06h

- The execution completion message is returned.

[STX] [command] [data] [ETX]
02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.

[data]: This is the data to be returned. It can be omitted.
[example]: Send command Return message (data)
[STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

- The receive completion message is returned.

[ACK]
06h

- An error code is returned.

[STX] E R N₁ N₂ N₃ [ETX]
02h Error code 03h

4. Error code table

- ER001: Invalid command
- Unsupported command received
 - Error in command execution
- ER002: Parameter error
- ER102: VTR mode error (front loading motor)
- ER103: VTR mode error (loading motor)
- ER104: VTR mode error (drum, capstan system)
- ER105: VTR mode error (reel system)
- ER106: VTR mode error (tension system)
- ER108: VTR dew (condensation) error
- ER1FF: VTR system error

RS-232C Interface

5. Command table

(1) Commands relating to operation control

<Notes>

- Under the "return (completion) message", only the execution messages which are returned after [ACK] is returned when data is received are listed.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel.
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The output picture status differs according to the setup menu item No. 111 (FRZ MODE SEL) setting. For details, refer to the setup menu item.
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The maximum tape speed differs according to the setup menu item No. 102 (FF. REW MAX) setting. For details, refer to the setup menu item.
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The maximum tape speed differs according to the setup menu item No. 102 (FF. REW MAX) setting. For details, refer to the setup menu item.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command. data = n: speed data 0: STILL (STILL) 1: x0.03 (x0.03) 2: x0.1 (x0.1) 3: x0.2 (x0.2) 4: x0.5 (x0.5) 5: x1 (x1) 6: x1.85 (x1.85) 7: x4.1 (x3.1) 8: x9.5*1 (x9.5*1) 9: x16*1 (x16*1) A: x32*1 (x32*1) *1: [This speed differs according to the setup menu item No. 101 (SHTL MAX) setting.] The speeds for the DV format are given in parentheses.

RS-232C Interface

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command. data = n: speed data 0: STILL (STILL) 1: x0.03 (x0.03) 2: x0.1 (x0.1) 3: x0.2 (x0.2) 4: x0.5 (x0.5) 5: x1 (x1) 6: x1.85 (x1.85) 7: x4.1 (x3.1) 8: x9.5*1 (x9.5*1) 9: x16*1 (x16*1) A: x32*1 (x32*1) *1: [This speed differs according to the setup menu item No. 101 (SHTL MAX) setting.] The speeds for the DV format are given in parentheses.
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is for setting the VTR to STANDBY OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is for setting the VTR to STANDBY ON.

RS-232C Interface

(2) Commands related to inquiries

<Notes>

- Under the "return (completion) message", only the execution messages which are returned after [ACK] is returned when data is received are listed.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display - (20h): for a minus display h = 0-9: hours TC: gh = 00-23: hours mm = 00-59: minutes ss = 00-59: seconds ff = 00-24: frames (625 mode) = 00-29: frames (525 mode)	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORW: REWIND OSP: STOP (including STANDBY ON) SRS: PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D940E (625 mode) AJ-D940 (525 mode)	

RS-232C Interface

(3) Microsoft QuickBASIC sample programme

```
CLS
STX$ = CHR$(6H2): ETX$ = CHR$(6H3): NAK$ = CHR$(15): ACK$ = CHR$(6H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
    WAITKEY$ = INKEY$
    IF WAITKEY$ = "Q" THEN PRINT "*** Quit ***": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RCV$ = INPUT$(1, #1)
IF RCV$ = STX$ THEN RCV$ = "[Stx]"
IF RCV$ = ACK$ THEN RCV$ = "[Ack]"
IF RCV$ = NAK$ THEN RCV$ = "[Nak]"
IF RCV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[EtX]": GOTO DispOut
BUFFER$ = BUFFER$ + RCV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```

Connector Signals

REF VIDEO IN

REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided
--------------	---------	---

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3
Y, P _B , P _R (ANALOG)	BNC × 3
VIDEO OUT	BNC × 3

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3	
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, CH3/CH4 AES/EBU format
AUDIO OUT (ANALOG)	XLR × 4	CH1, CH2, CH3, CH4
CUE OUT	XLR × 1	
TIME CODE OUT	XLR × 1	
MONITOR OUT	XLR × 2	L/R
HEADPHONES (front panel)	6.35 mm	

Pin No.	Signal
1	GND
2	HOT
3	COLD

RS-422A REMOTE (9P)

REMOTE IN

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

Connector Signals

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	————	19	STAND BY ON STATUS
2	STOP COMMAND	11	————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	————	14	STOP STATUS	23	————
6	EJECT COMMAND	15	FF STATUS	24	————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	————		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- Supply TTL level, active low electrical signals with an edge of 100 ms or more to the COMMAND pins.
- The STATUS pins are open collector outputs; a max. sink current of 6 mA is output from these pins.

RS-232C REMOTE (D-SUB 25 pins, crossover cable supported)

Pin No.	Signal	Circuit name	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Data is sent to PC.
3	TxD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	Not processed
7	GS	Signal ground	Signal ground
20	DSR	Data set ready	+ power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	————	6	SYSTEM H 0	11	RET GND
2	BLACK LEVEL	7	SYS.SC COARSE (2)	12	————
3	C LEVEL	8	−12V	13	————
4	GND	9	CHROMA PHASE	14	SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

SECTION 2

DISASSEMBLY & MAINTENANCE

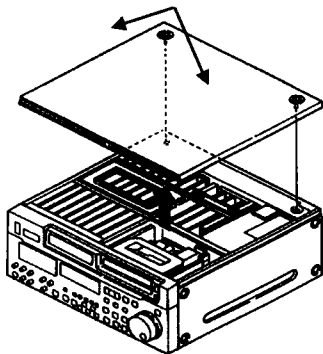
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1-2.	Removal of Bottom Panel	DIS-1
1-3.	Removal of Upper Front Panel	DIS-1
1-4.	Removal of Front Panel	DIS-1
1-5.	Removal of Front Loading Unit	DIS-1
1-6.	Removal of Power Supply Unit	DIS-2
1-7.	Removal of Mechanism Unit	DIS-3
1-8.	Removal of Fan Motor	DIS-3
2.	Maintenance Parts Chart	DIS-4
3.	Cleaning Procedures	DIS-6
3-1.	Cleaning of Head Chips: (Daily)	DIS-6
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3-3.	Cleaning of A/C Head: (Weekly)	DIS-6
3-4.	Cleaning of Pinch Roller and Capstan: (Weekly)	DIS-6
3-5.	Cleaning of Post: (Weekly)	DIS-6

1. Disassembly Method

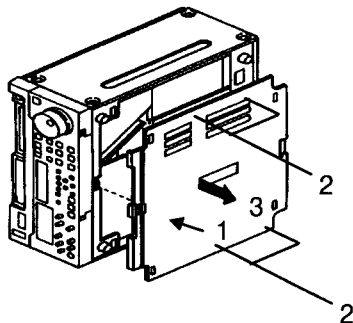
1-1. Removal of Top Panel

Loosen 2 screws.



Loosen 2 screws and remove the top panel.

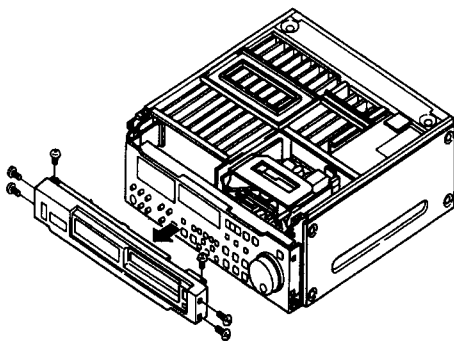
1-2. Removal of Bottom Panel



- (1) Loosen the screw 1.
- (2) Remove the 4 screws numbered 2.
- (3) Slide the bottom panel and remove it.

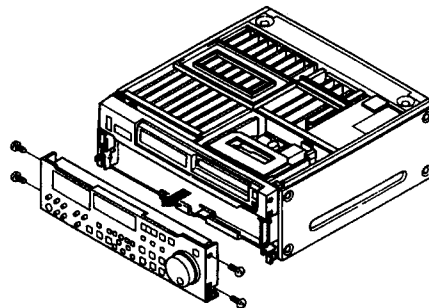
1-3. Removal of Upper Front Panel

- (1) Remove the 4 screws at right and left, then draw the upper front panel.



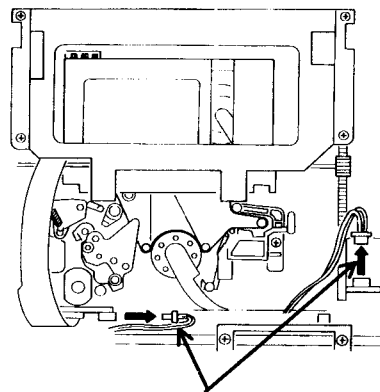
1-4. Removal of Front Panel

- (1) Remove the 4 screws at left and right. Then draw it and remove the connector and remove the Front Panel.



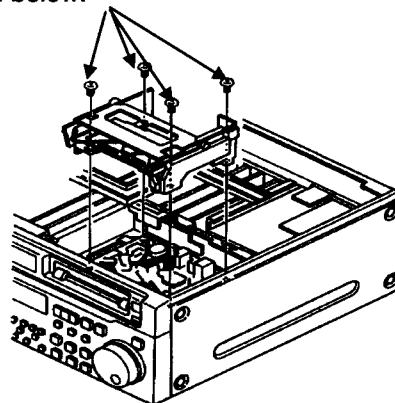
1-5. Removal of Front Loading Unit

- (1) Remove the connectors at front loading motor and interconnection board. Then rotate the emergency eject gear (red) counterclockwise until the screw which is used to fix the front loading u can be seen.



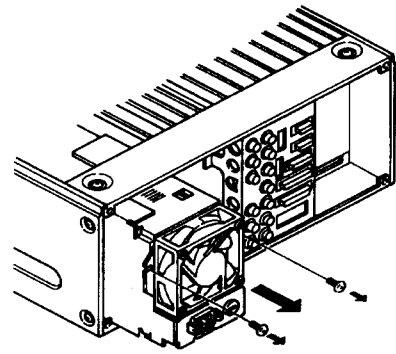
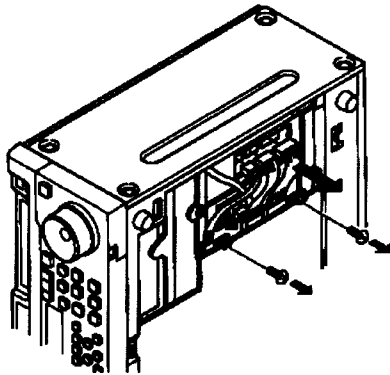
Remove 2 connectors.

- (2) Remove the 4 screws of the loading unit as shown below.

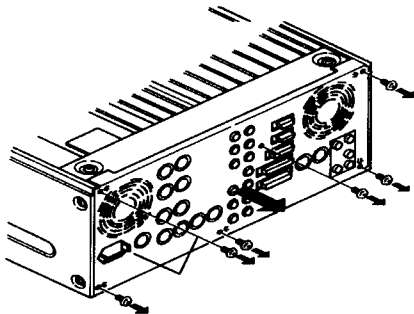


1-6. Removal of Power Supply Unit

- (1) Remove 5 connectors with the Power Supply unit on the VTR bottom side.
- (2) Remove 2 screws with the Power Supply unit on the VTR bottom side.



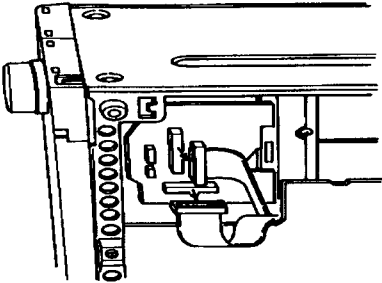
- (3) Remove 1 screw with the Power Supply unit on the VTR top side.



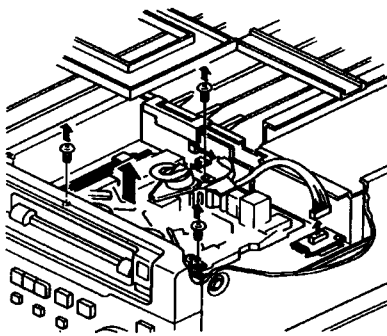
- (4) Remove 2 screws at VTR Rear panel which are used to fix the Power supply unit.

1-7. Removal of Mechanism Unit

1. Remove the front loading unit.
2. Remove the connector P1 and P2 which are connected to mech interface at VTR bottom.

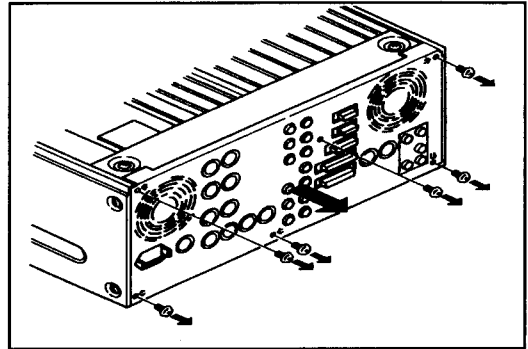


Remove the A/C Head cable from the intermediate point, and remove the P5003 and P5002 which are connected between the cylinder unit and Head Buffer board. Then remove the 3 screws and remove the mechanism unit.

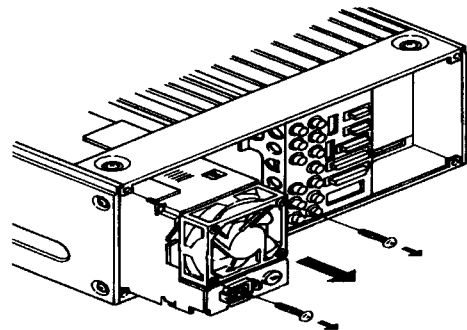


1-8. Removal of Fan Motor

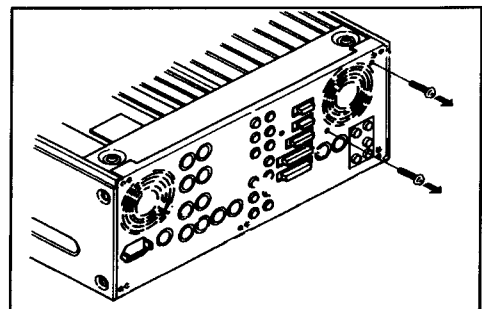
1. Remove the Rear Jack by removing 7 screws.



2. Remove 2 screws and Power 2 connector P14 then remove the fan motor.



3. Remove 2 screws and mother board connector P32, then remove fan motor.



2. Maintenance Parts Chart

	Name	Part No.	Hours of Use (unit hours)					
			2,000	4,000	6,000	8,000	10,000	12,000
	Tape Path Cleaning	—	"△" Clean the Tape Path at each 500 hours					
1	Cylinder Unit	VEG1503	●	●	●	●	●	○
2	Pinch Arm Unit	VXL2835	●■	●■	●■	●■	●■	○
3	Cleaning Arm Unit	VXL2748	●	●	●	●	●	○
4	S Reel Motor A Unit	VEM0686		●		●		○
5	T Reel Motor A Unit	VEM0687		●		●		○
6	Thrust Screw Unit	VXQ0556		●▲		●▲		○
7	S Loading Arm Unit	VXL2812			●			○
8	T1 Boat Unit A	VXA6379			●			○
9	S Post Base A Unit	VXA6052			●			○
10	Tension Arm S Unit	VXL2832			●			○
11	Cassette Compartment	VXA6070						○
12	Mech. Chassis Unit	VXY1418Z						●
13	Fan Motor	VRF0208	Replace the Fan Motor at each 10,000 hours <i>Operation Time.</i>					
14	A/C Head	VED0419						○
15	Loading Motor (1) A Unit	VEM0645						○
16	Reel Drive Motor Unit	VEM0585						○
17	Mode Switch Unit	VES0814						○
18	Pinch Solenoid	VSJ0227						○
19	S Brake Solenoid	VSJ0216						○
20	T Brake Solenoid	VSJ0216						○
21	Thinner Tape Detection Switch	VXA6119						○
22	Cleaner Solenoid	VSJ0226						○
23	Main Cam Gear	VDG1168						○
24	Brake Solenoid (M Stopper)	VSJ0216						○
25	Slot In Motor	VXA5597						○

Symbol	Maintenance	Remark
●	Replacement	
■	Greasing	Wipe the old grease and apply new grease.
△	Cleaning	This mark means cleaning is necessary.
▲	Lubrication	The lubrication is necessary (VFK0906)
◎	Replacement	These parts are included in Mech Chassis Unit.

Note: Hours of Use are based on the head rotation hours.

Hours of Use are recommendation. It may depend on temperature, humidity or dust.

Hours of Use are listed as the reference of maintenance. They do not mean guaranteed hours.

3. Cleaning Procedures

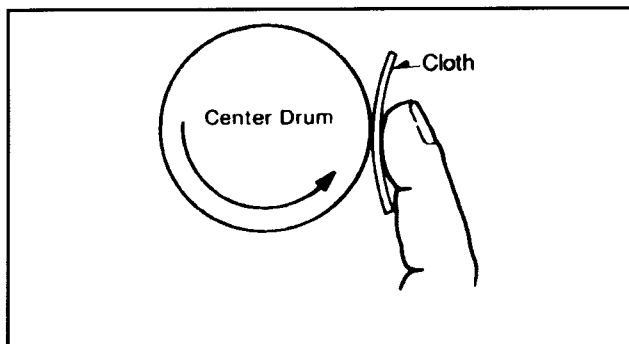
Note: Turns power off during cleaning.

Make sure the power is OFF before cleaning.

Use ethanol (more than 99% purity) as cleaning liquid.

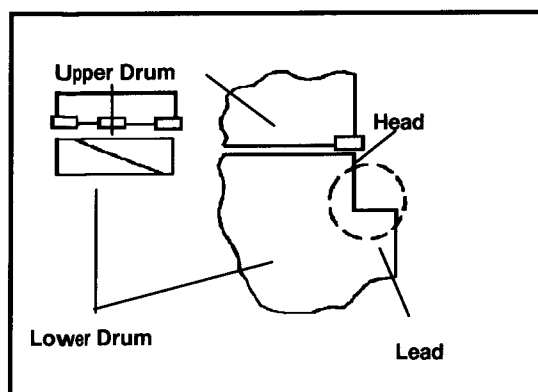
3-1. Cleaning of Head Chips: (Daily)

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.



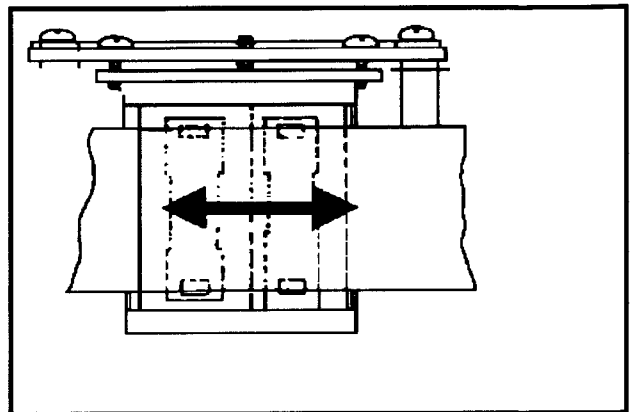
3-2. Cleaning of Drum Lead: (Weekly)

Be careful not to touch a head chip. Clean the drum lead with a pick.



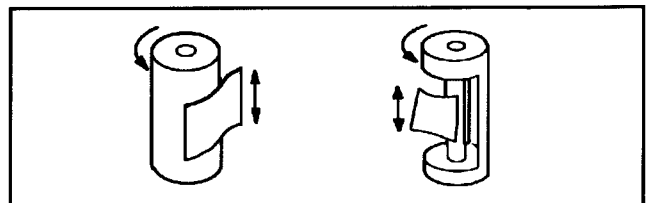
3-3. Cleaning of A/C Head: (Weekly)

Wipe the A/C head with a cloth soaked by cleaning liquid. Wipe again with a dry cloth.



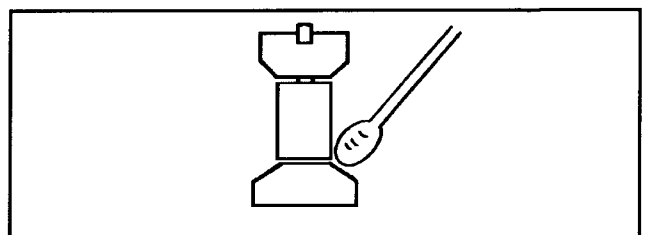
3-4. Cleaning of Pinch Roller and Capstan: (Weekly)

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.



3-5. Cleaning of Post: (Weekly)

Wind a cloth on a pick. Wipe each post dry with that pick. Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.



Note: Use the clean cloth for cleaning purpose. Do not use any dirty cloth.

SECTION 3

MECHANISM ADJUSTMENTS

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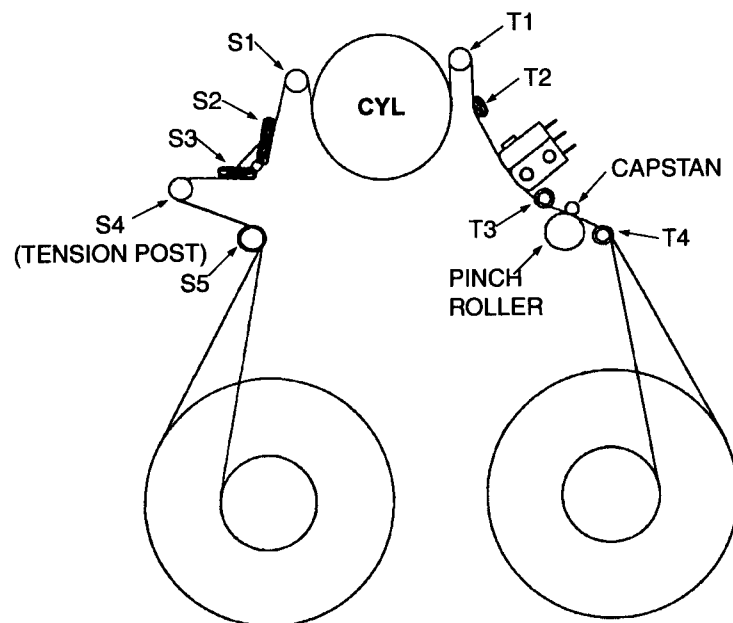
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		2-30. Thrust Screw Replacement and Adjustment	MEC-67

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1. Mechanism Adjustment

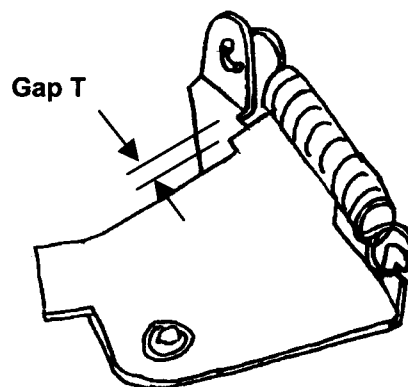
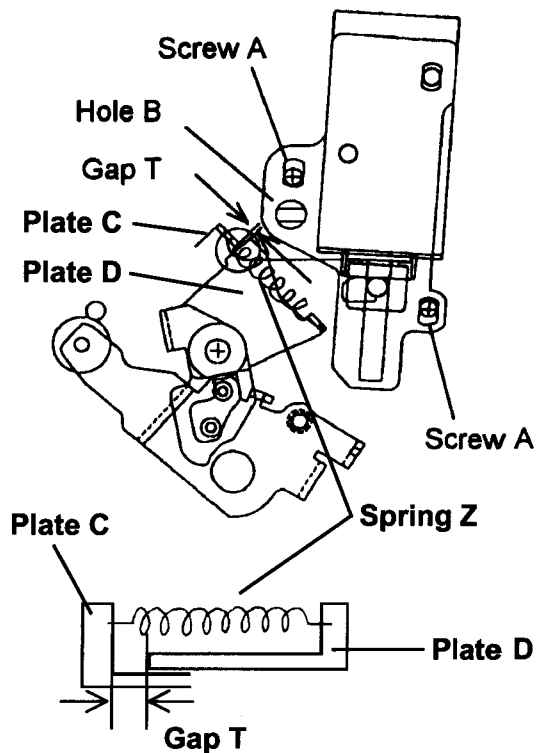
1-1. Name of tape transportation



1-2. Pinch Solenoid Position Adjustment

Specification	T = 0.3mm
Test Point	Space at T portion
Adjustment	A, B
Mode	EJECT (Power Off)
Tool	VFK0357 (Eccentric Driver)

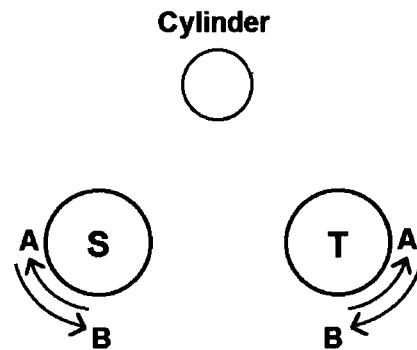
1. Turns power off.
2. Close the pinch roller to the capstan shaft.
3. Press the pinch solenoid by your hand and touch the pinch roller with the capstan shaft.
4. Loosen the 2 screws A and adjust B portion so that the Gap T is in the specification by VFK0357.
5. Tighten the 2 screws A after adjustment.



1-3. Main Brake Torque Confirmation

Specification	A: more than 80g B: more than 15g
Test Point	S Reel, T Reel
Mode	EJECT (Power OFF)
Tool	VFK71(150g), VFK1191(45g), VFK1152

1. Remove the cassette compartment.
2. Attach the Adaptor (VKK1152) with the torque meter.
3. Attach the torque meter with the S Reel table and rotate it to A direction (CW).
4. Confirm the reel torque is in the specification when the brake is released and the reel starts rotation.
5. Confirm T Reel torque in the same way with S Reel torque.
6. Remove the Adaptor (VKK1152) and attach the adaptor with the torque meter (VFK1191).
7. Attach the torque meter with the S Reel table and rotate it to B direction (CCW).
8. Confirm the reel torque is in the specification when the brake is released and the reel starts rotation.
9. Confirm T Reel torque in the same way with S Reel torque.



1-4. Post Height Pre-Adjustment

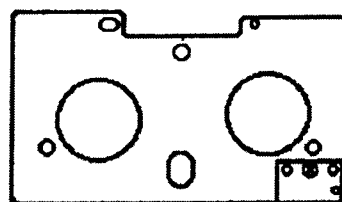
Mode EJECT (Power OFF)

Tool VFK1153, VFK1154 (flange tool)

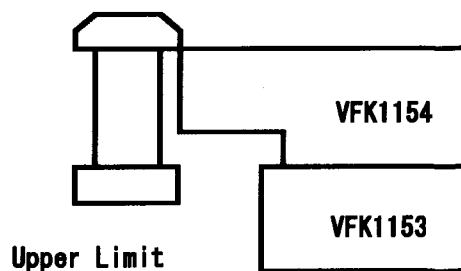
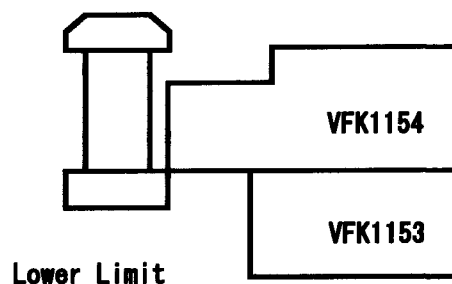
1. Insert M cassette tape, and eject the tape.
2. Turns power off and remove the cassette compartment and set mechanism plate (VFK153).
3. Place the flange tool (VFK1154) as shown in the figure and adjust the post height.
4. Adjust the S4 and T5 post height by VFK1149 and adjust T3 and T4 by VFK1151.

Name	Limit	Post Driver
S5 Post	Note 1	VFK1149
S4 Post	Note 1	VFK1149
T3 Post	Lower Limit	VFK1151(2.5mm Nut Box)
T4 Post	Lower Limit	VFK1151 (2.5mm Nut Box)

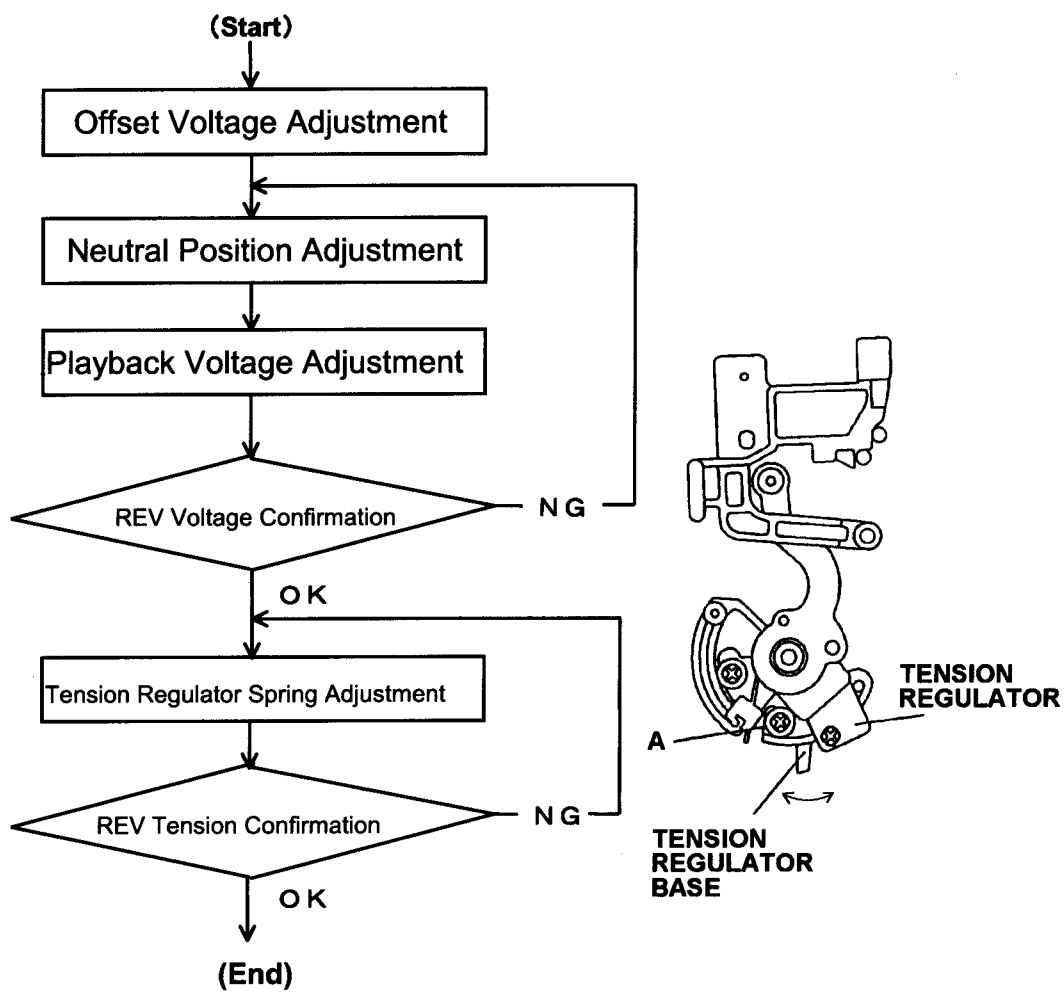
Note 1: Rotate CCW one turn from the lower limit.



Set mechanism plate with thinner tape detection switch pushing Plastic parts



1-5. Tension Arm Adjustment Procedures

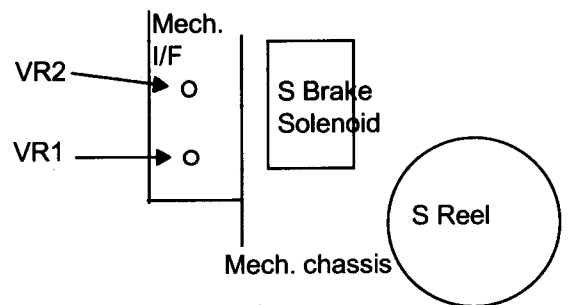


1-6.Tension Arm Offset Voltage Adjustment

Board	SERVO
Specification	$2.5 \pm 0.05V$
Test Point	TP201(SERVO:F1)
Adjustment	VR1(Mech. IF)
Mode	EJECT
M. EQ.	Digital Volt Meter

1. Set the VTR in EJECT mode and confirm the voltage at TP201 is in the specification.
2. If it is not, adjust VR1 on the Mech. I/F Board so that the voltage is in the specification.

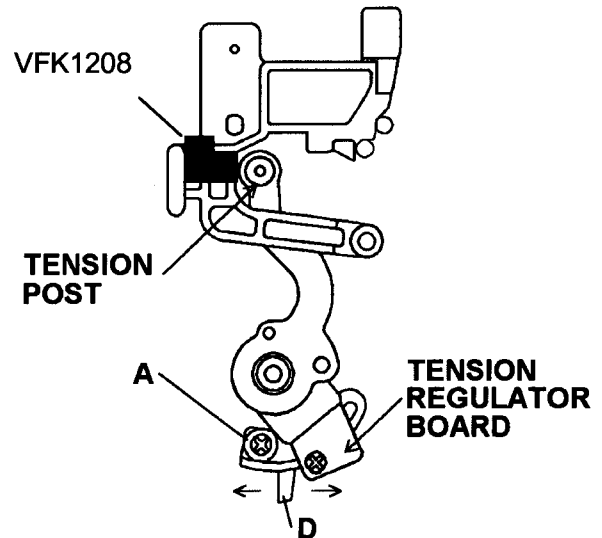
S Brake Solenoid Side View



1-7. Neutral Position Adjustment

Board	SERVO
Specification	$2.5 \pm 0.1V$
Test Point	TP201(SERVO:F1)
Adjustment	Tension Regulator Board Base Position
Mode	STOP
M. EQ.	Digital Volt Meter VFK1208(Black, with a hole)

1. Remove 4 screws on the Front Loading Unit and Remove it, then set the VFK1208 (Black , with a hole).
2. To set the VTR in no tape loading mode, set the DIP SW1 at the rear panel ON to open the service menu. Then select "T REEL TRQ" and press JOG/SHTL key. During adjustment JOG/SHTL key must be hold. Do not touch the Magnetised screw driver to the Reel FG magnet.
3. Adjust the Tension Regulator Board Base Position so that the voltage at TP201 is in the specification in STOP mode. To adjust the Tension Regulator Board Base Position, loosen the screw A and move the knob D portion by a screw driver without magnetization and tighten the screw A.

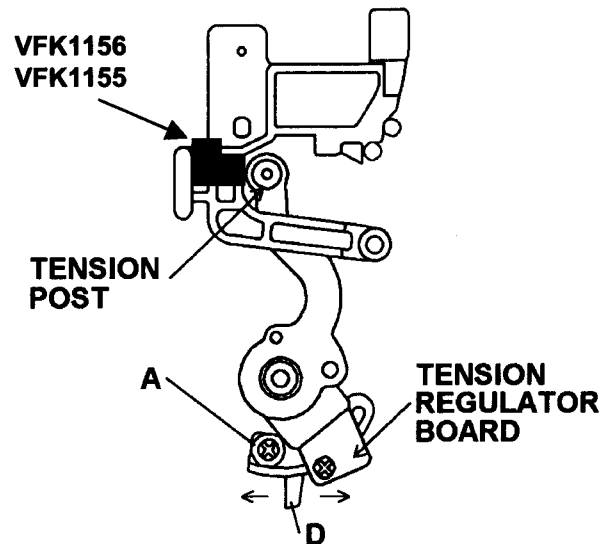


Adjust A and D at the same time.

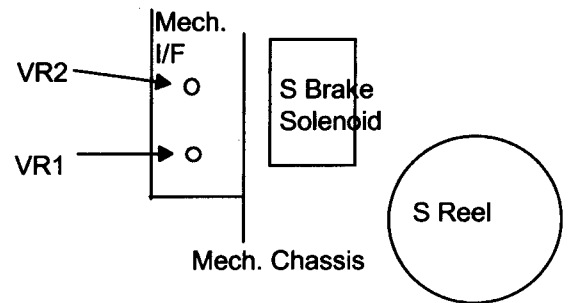
1-8. Tension Arm PLAY & REV Voltage Confirmation and Adjustment

Board	SERVO
Specification	(PLAY) $3.8 \pm 0.05V$ (REV) $1.2 \pm 0.3V$
Test Point	TP201(SERVO:F1)
Adjustment	VR2
Mode	STOP
M. EQ.	Digital Volt Meter. VFK1156(Black: PLAY) VFK1155(White: REV)

1. Remove 4 Screws on the Front Loading Unit and Remove it, then set the VFK1156 (Black).
2. To set the VTR in no tape loading mode, set the DIP SW1 on the rear of the front panel to ON to open the service menu. Then select "T REEL TRQ" and press JOG/SHTL key. During adjustment JOG/SHTL key must be hold. Do not touch the Magnetised screw driver to the Reel FG magnet.
3. Confirm the voltage at TP201 is in the specification.
4. If it is not, adjust VR2(Mech. I/F) so that the voltage is in the specification.
5. Then set VFK1155.
6. If it is not, adjust "Tension Arm Neutral Position Adjustment" again.
If it is out of specification after this adjustment, replace the tension post unit.



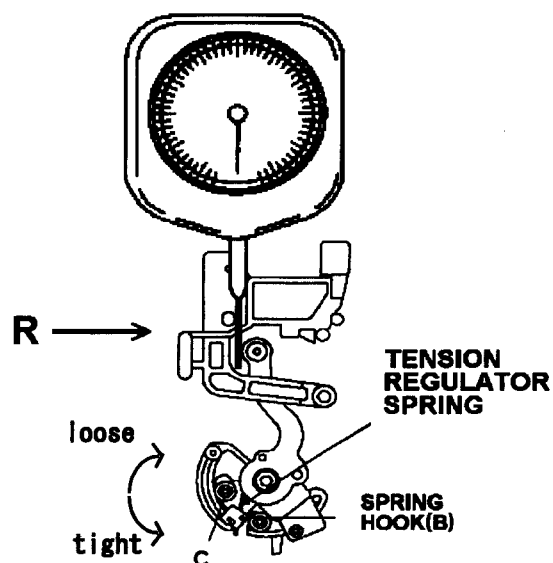
S Brake Solenoid Side View



1-9. Tension Regulator Spring Adjustment

Board	SERVO
Specification	$11 \pm 1\text{gf}$
Test Point	TP201(SERVO:F1)
Adjustment	Tension Regulator Spring Hook (B)
Mode	STOP
M. EQ.	Digital Volt Meter. VFK1188(30g Dial Tension Meter)

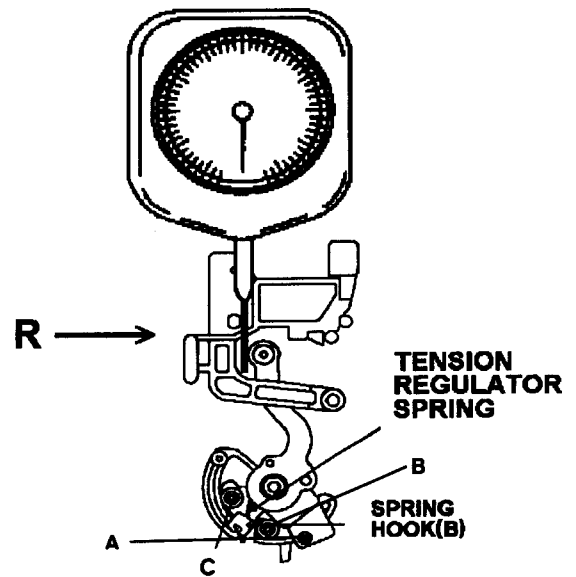
1. Set the VTR in no tape loading.
2. Press the tension post by the Dial Tension Meter to R direction.
3. Read the Dial Tension Meter when the voltage is 3.8 V (PLAY position) at TP201, and adjust the Tension Regulator Spring Hook (B).
4. To adjust the Tension Regulator Spring Hook (B) position, loosen the Tension Regulator Spring position and after adjustment tighten the screw C.



1-10. REV Tension Confirmation

Board	SERVO
Specification	$18 \pm 2\text{gf}$
Test Point	TP201
Mode	STOP
M. EQ.	Digital Volt meter VFK1188(30g Dial Tension Gauge)

1. Place the VTR into no tape loading.
2. Press the tension post by the Dial Tension Meter to R direction in STOP mode.
3. Read the Dial Tension Meter when the voltage is 1.2 V (REV position) at TP201, and adjust the Tension Regulator Adjustment again.
4. Grew the screw A, B and C after Tension Arm adjustment. The grew quantity at B is half of A and C.

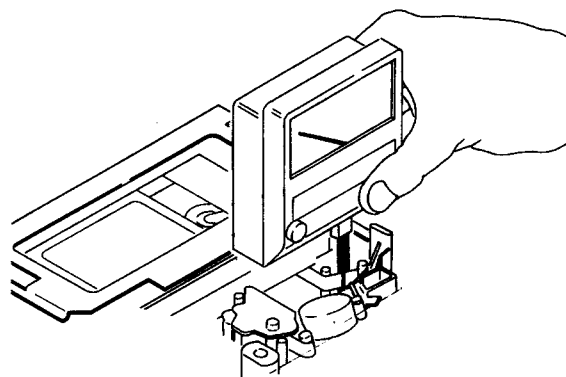
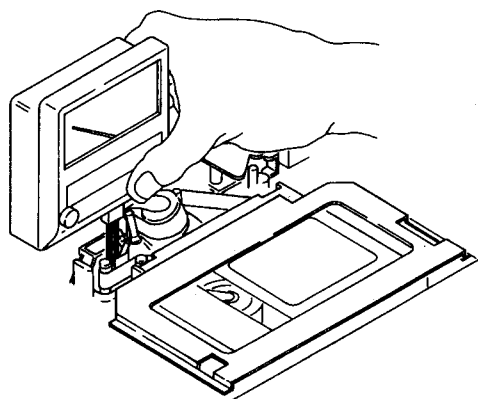


1-11. Tension Confirmation

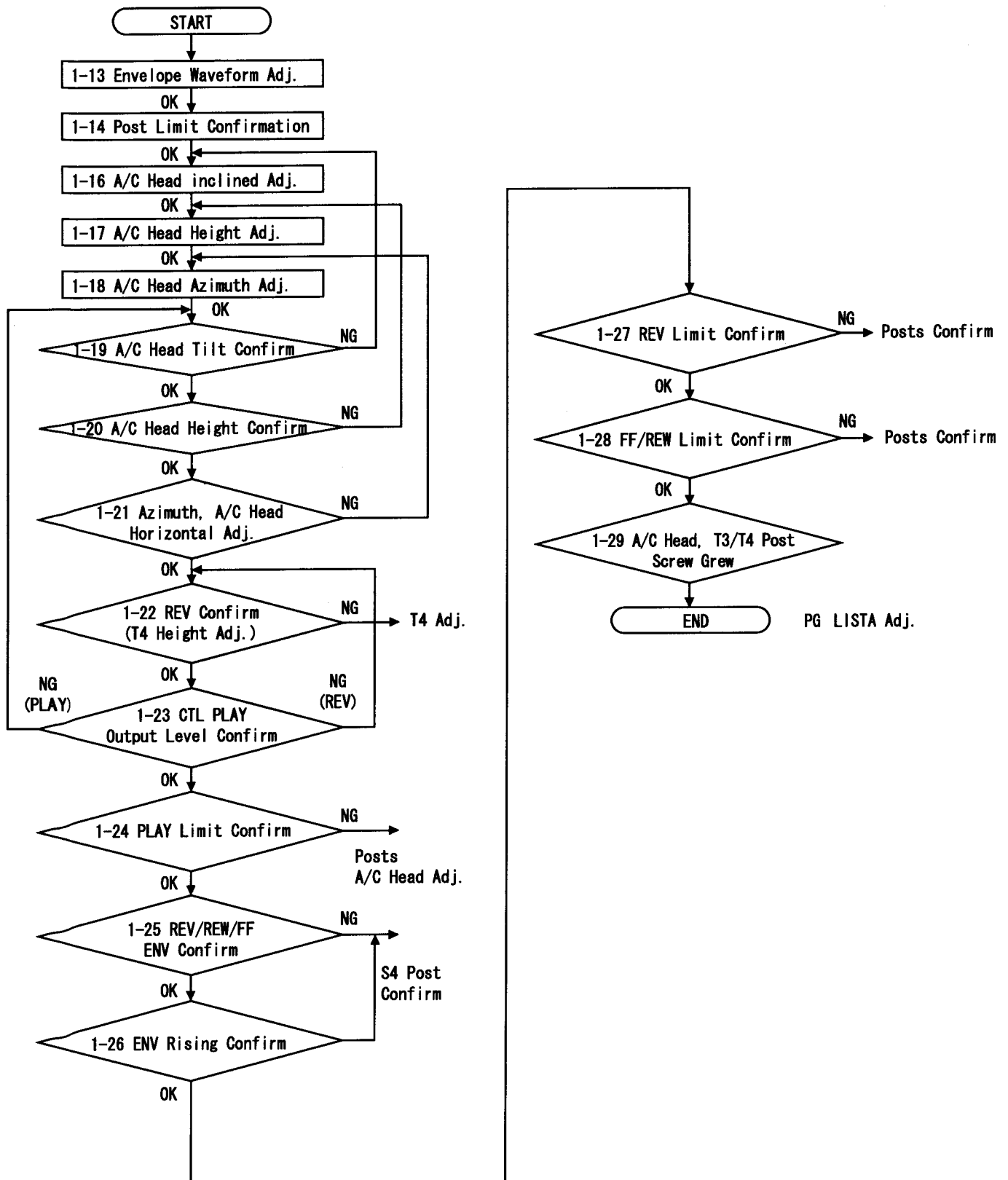
Specification	(PLAY) $6.0 \pm 1\text{gf}$ (REV) $9.0 \pm 2\text{gf}$
Mode	PLAY, REV $\times 1$
Tape	Beginning of 63min.M Cassette
Tool	VFK1145(Tension Meter)

1. Playback the beginning of 63min. M cassette.
2. Set a tension meter between S3 and S4 post.
3. Confirm the tension is in the specification.
4. Set the VTR is in REV mode.
5. Set the tension meter between S4 and S5 posts.
6. Confirm the tension is in the specification.

Do not damage a tape during measurement.



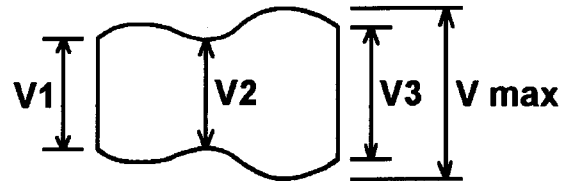
1-12. Tape Pass Adjustment Procedures



1-13. ENV waveform Adjustment

Specification	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$
Test Point	TP722(F1) for Trigger TP201 R/P ENV L:H3/ R:H4
Adjustment	S1, T1PostHeight
Mode	PLAY(ATF)
Tape	VFM3580KM(No.1)
M. EQ.	Oscilloscope
Tool	VFK1149(Post Driver)

1. Playback the color bar portion of the alignment tape.
2. Adjust S1 and T1 post height so that the R/P envelope output is in the specification.
3. When the S1 and T1 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
4. Adjust T1 post and makes exit side of the envelope flat then adjust S1 post.
5. After the adjustment, unload the tape then loading the tape. Confirm the waveform style.

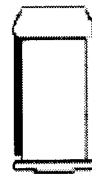


1-14. Post Limit Confirmation (Play)

Specification	No curl at the Tape edge All Post Limit
Mode	PLAY
Tape	Signal recorded Tape
Tool	VFK1149(Post Driver) VFK1151(Nut Driver)

1. Confirm the each Post Limit is as shown in figure, if it is not adjust the post height.
2. Confirm that there is no tape problem as D, E, F in the figure.

Post	Limit	Adjustment
S5	Free or Lower Limit	S5 Post Height
S4	Lower Limit	S4 Post Height
S1	Upper Limit	Linearity Coarse
T1	Upper Limit	Linearity Coarse
T3	Lower Limit	T3 Post Height
T4	Free or Lower Limit	T4 Post Height



A Upper



B Free



C Lower



D Curl



E Bend



F Drop

1-15. A/C Head ADJUSTMENT Method (summary)

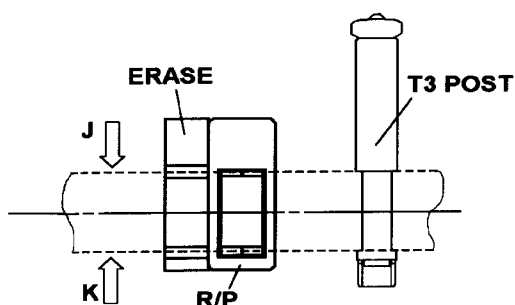
Item	Screw	Adjustment	Torque
Tilt Adjustment	A	CW --- Decrease CUE Level CCW --- Increase CUE Level	(Adjustment)
Height Adjustment	B	CW --- If the level is increased at "k". CCW --- If the level is increased at "j".	(Adjustment)
Azimuth Adjustment	F	Adjust phase by the screw F.	(Adjustment)
A/C Head Horizontal Position Adj.	C D	Adjust A/C Head Horizontal Position by VFK0357 (Eccentric Driver) at long hole E, then tighten the screw C and D.	2.5 Kgf · cm
Tilt	G	Adjust by tightening the screw except tilt and azimuth adjustment.	1.0 Kgf · cm
Height Fix	H	After the Height Adjustment, tighten screw H to fix the A/C Head Height.	

Screw	Tool
A	VFK1178 (0.89 mm Nut Driver)
B	VFK1150 (5.5 mm Nut Driver)
F	VFK1148 (1.5 mm Nut Driver)
C, D, G	VFK1209 (Torque Driver) VFK0912 (1.5 mm Hex Driver Bit)
H	VFK1190 (1.5 mm L type Hex Wrench)

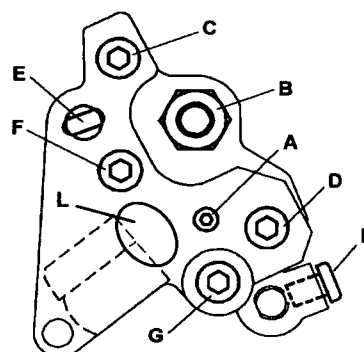
1. Each Adjustment must be done keeping the screw G tighten.
2. When tilt is adjusted, confirm the screw A is tighten. (A/C Head must be touch with the fix plate.)
3. When tilt is adjusted confirm that there is no tape damage at T3 Post.
4. When Height is Adjusted, loosen the screw H. After the adjustment tighten screw H.
5. When the each Adjustment is done, each adjustment screw must be rotated CW.

And hit slightly the L part to remove the mechanical distortion.

6. Adjust or confirm alternately each Adjustment and Envelope Output waveform Adjustment



A/C HEAD HEIGHT



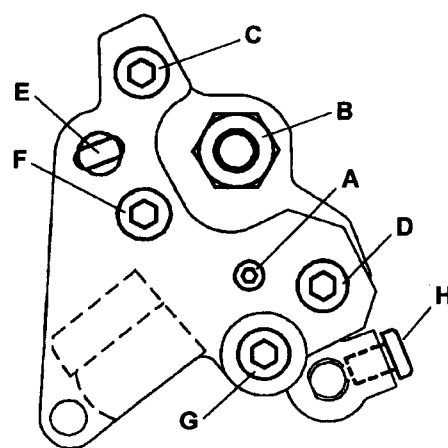
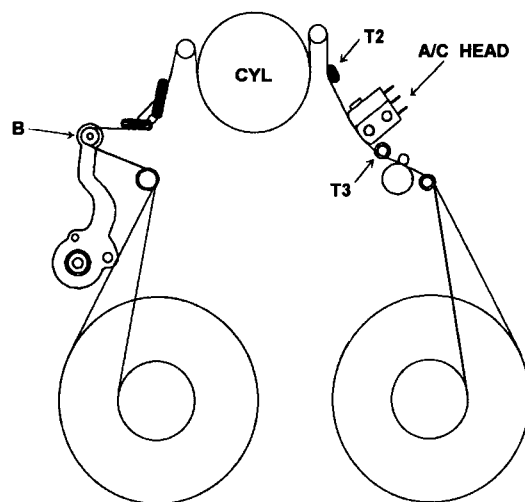
1-16. A/C Head Tilt Adjustment

Specification	No curling and bending at tape edge. T3 Post Lower Limit
Adjustment	Screw A, G (A/C Head)
Mode	PLAY
Tape	Signal recorded Tape
Tool	VFK1148, VFK1178 (Hex Wrench)

1. Adjust A/C Head Tilt by screw A so that the Tape is at lower limit at T3 Post.
2. For this Adjustment, loosen screw G and make tape curling at T3 lower flange then gradually tighten screw G to make the tape flat. The screw G tightening torque is 1.0 Kgf · cm.

(Reference)

1. Screw A CW: Tape up
Screw A CCW: Tape down
2. It is necessary to tighten the each adjustment screw when the adjustment is completed.
3. Confirm and adjust alternately this adjustment and A/C Head each adjustment (Azimuth and Height).



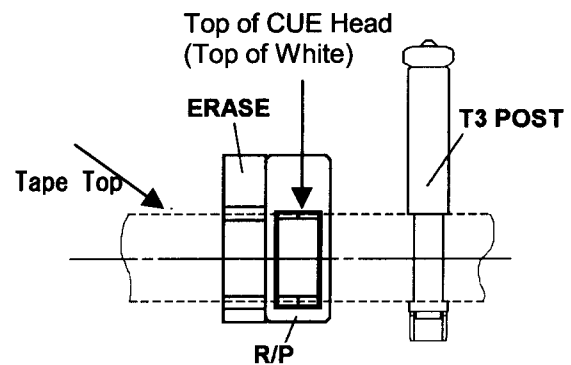
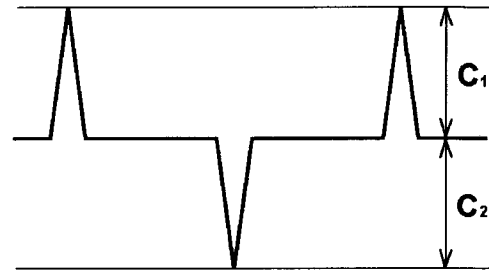
1-17. A/C Head Height Adjustment

Board	SERVO
Specification	CTL Max (C1,C2=1.8V or more)
Test Point	TP30(SERVO:F1)
Adjustment	Screw B, H (A/C Head)
Mode	PLAY
Tape	VFM3580KM (No.1)
M. EQ.	Oscilloscope
Tool	VFK1150(Nut Driver) VFK1190(Hex Wrench)

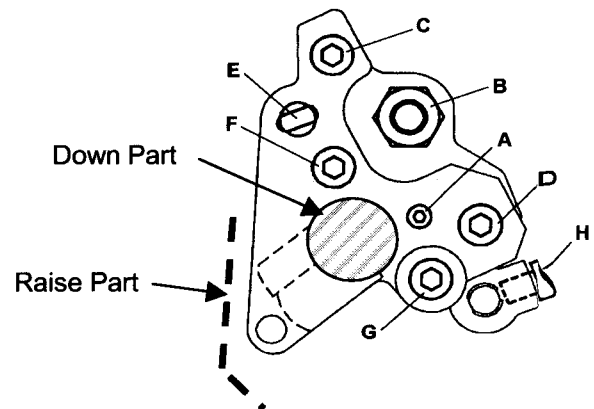
1. Connect a scope to TP30 on Servo (F1) board to observe CTL level.
2. Confirm that CTL level is decreased when A/C head is up and down at the point shown in the figure. If the CTL level is increased adjust nut B so that the CTL level is max.
3. Tighten screw H with 2.0 Kgf · cm torque then confirm the CTL level again.

(Reference)

1. Confirm and adjust alternately this adjustment and A/C Head each adjustment (Azimuth and Height).



A/C HEAD HEIGHT



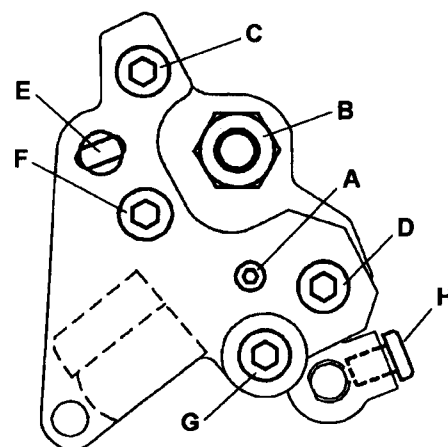
1-18. A/C Head Azimuth Adjustment

Board	SERVO
Specification	C1, C2 : Max
Test Point	TP30 (SERVO:F1)
Adjustment	Screw F (A/C Head)
Mode	PLAY
Tape	VFM3580KM (No.1)
M. EQ.	Oscilloscope
Tool	VFK1148 (Hex Wrench) VFK1209 (Torque Driver)

1. Connect a scope to TP30 on Servo (F1) board. Then adjust A/C Head Azimuth by the screw F so that the CTL level is max.
2. For this Adjustment, loosen screw G and adjust screw F then tighten screw G with 1.0Kgf · cm torque.

(Reference)

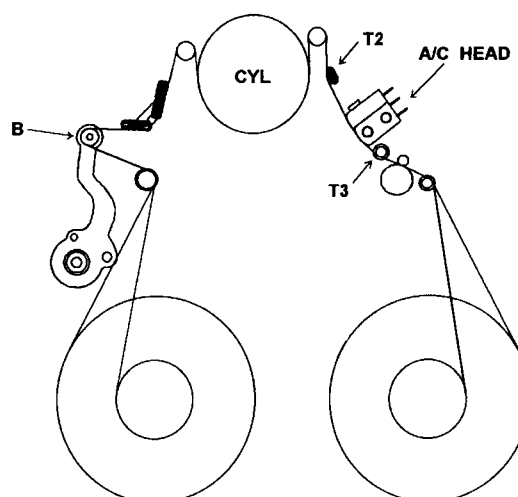
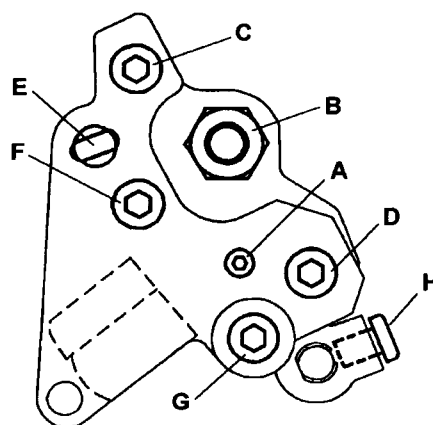
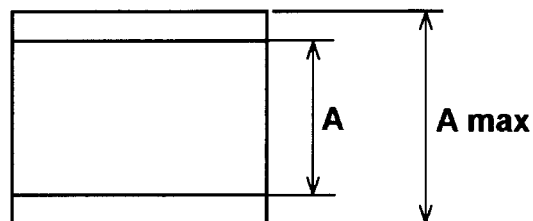
Confirm and adjust alternately this adjustment and A/C Head each adjustment (Azimuth and Height).



1-19. A/C Head Tilt Confirmation

Specification	A/Amax = 0.8 or more
Test Point	TP101 (CUE:H1)
Adjustment	Screw A, G (A/C Head)
Mode	PLAY
Tape	VFM3580KM (No.1)
M. EQ.	Oscilloscope
Tool	VFK1178, VFK1148 (Hex Wrench) VFK1209 (Torque Driver)

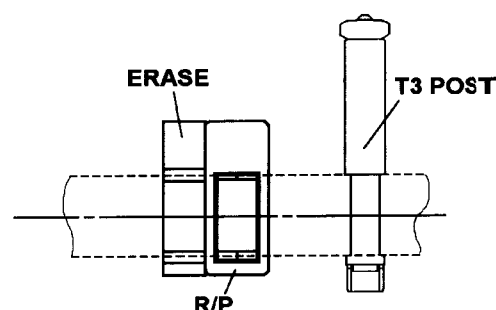
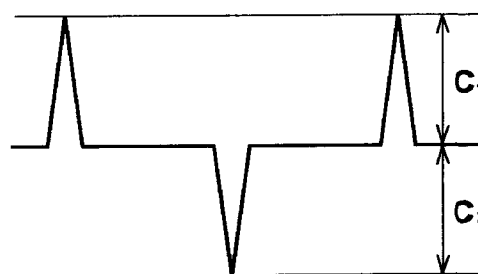
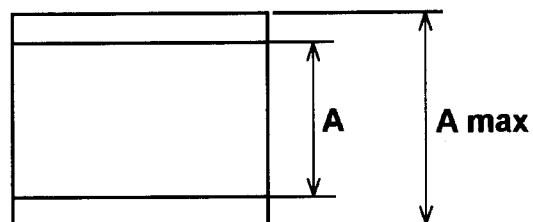
1. Playback the alignment tape CUE audio 6 kHz portion.
2. Confirm that screw G and H are tighten.
3. Connect a scope to TP101 and move the tension arm to B direction until T2 post is not moved, then confirm the output level variation is in the specification.
4. If it is not loosen screw G and adjust screw A then tighten screw G with 1.0 Kgf · cm torque.
5. It is necessary to complete the adjustment with screw A tighten and confirm that screw A is not loosen.
6. If this is adjusted confirm the Play Limit Confirmation (PLAY).



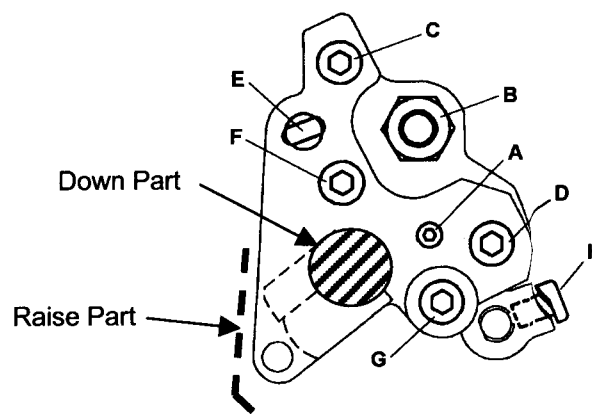
1-20. A/C Head Height Confirmation

Specification	A=0.95 X Amax or more C1, C2 = 1.8V or more
Test Point	TP101 CUE AUDIO(CUE:H1) TP30 CTL(SERVO:F1)
Adjustment	Screw B, H (A/C Head)
Mode	PLAY
Tape	VFM3580KM (No.1)
M. EQ.	Oscilloscope
Tool	VFK1150, VFK1190(Hex Wrench)

1. Playback the alignment tape CUE audio 6 kHz portion.
2. Connect a scope to TP101 and raise the A/C head or push down it to confirm the CTL level is not increased.
3. If it is increased, slightly adjust the "A/C Head Height Adjustment" and confirm the CTL level is correct.
4. If A/C Head Height is changed the azimuth is changed also. Therefore A/C Head azimuth must be adjusted and confirm alternately.
5. When A/C Head Height is fixed, tilt is changed by tightening screw H and the height is changed. Therefore Height confirmation must be done after tightening screw H.



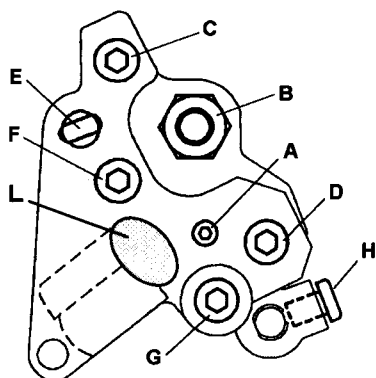
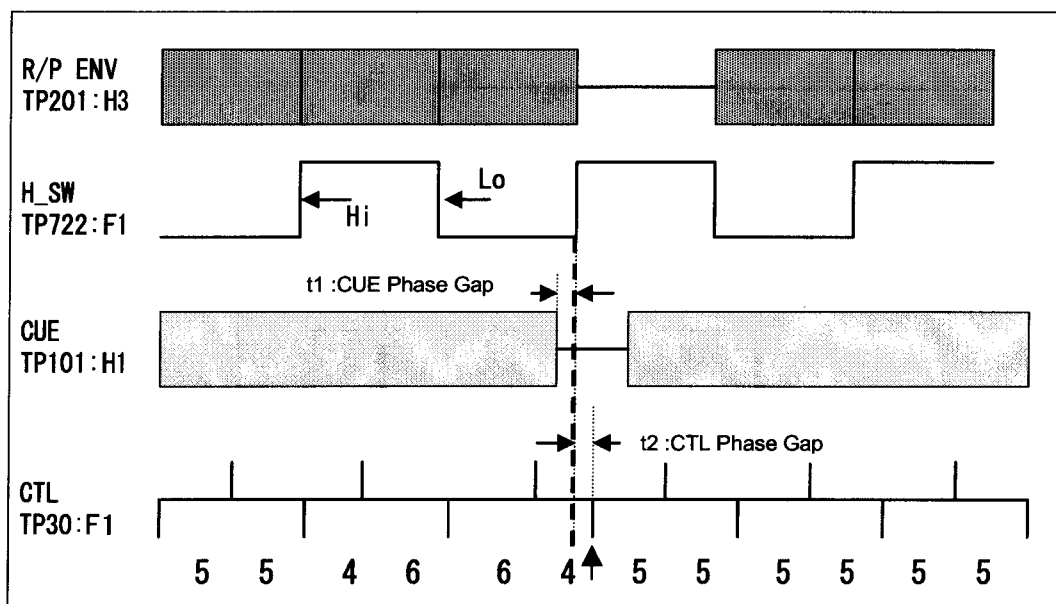
A/C HEAD HEIGHT



1-21. A/C Head Azimuth and Horizontal Position Adjustment

Specification	25M Mode $-250\mu s \leq t_1, t_2 \leq +250\mu s$ 50M Mode $-125\mu s \leq t_1, t_2 \leq +125\mu s$	Test Point	TP201 R/P ENV L(RFEQ:H3) TP722 R/P HSW (SERVO:F1) TP101 CUE AUDIO (CUE:H1) TP30 CTL (SERVO:F1)
Adjustment	A/C Head	M. EQ.	Oscilloscope
Mode	Playback	Tool	VFK0357(Eccentric Driver)
Tape	VFM3582KM (A/C Head H. Position)		

1. Set the VTR in 25M Mode and playback an Alignment Tape (A/C Head H. Position).
2. Adjust Azimuth so that the CTL and CUE drop portion is match (Refer to Azimuth Adjustment).
3. Connect a scope CH1 to TP201 on H3 board and CH2 to TP722 on F1 board. Then find the R/P ENV lack portion, and remember the H_SW is High or Low at the portion. (H_SW High or Low is changed at each tape loading.)
4. Adjust A/C Head Horizontal Position so that the memorized H_SW and CTL trigger at the frame start is matched. The frame start CTL is located at the falling edge between 6:4 and 5:5 portion. To adjust the Horizontal position loosen screw C and D then adjust horizontal position by eccentric driver at hole E.
5. After adjustment, tighten the screws with 2.5kgf · cm torque and hit gently at L portion to remove the mechanical distortion. Confirm the above specification.
6. Set VTR into 50M PB Mode, and confirm the timing is in the specification. If it is not adjust this item again.



1-22. REV Confirmation and Adjustment (T4HeightAdjustment)

Specification	$C1, C2 \geq Cp1, Cp2 \times 0.75$ Lower Limit at T3Post in REV	Tape	VFM3580KM (No.1)
Test Point	TP30 (SERVO:F1)	M. EQ.	Oscilloscope
Adjustment	T4 Post Height	Tool	Nut Driver
Mode	REV X 1		

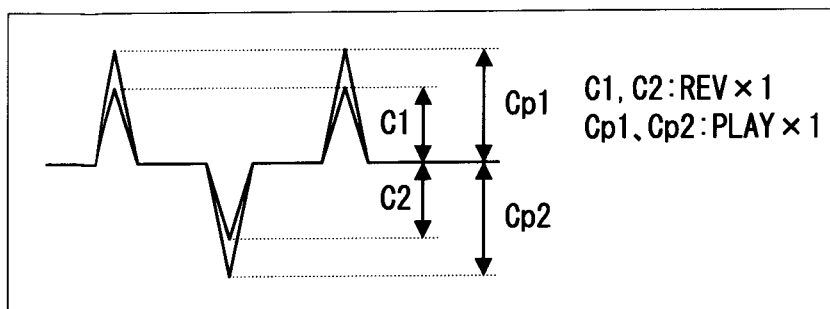
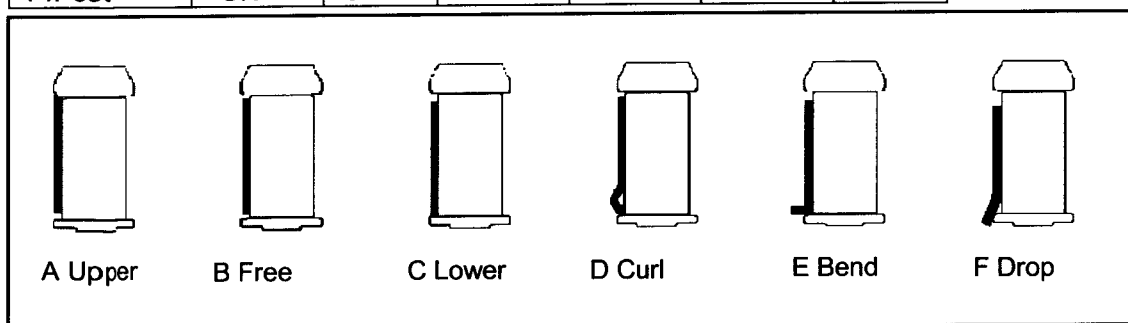
1. Run the Tape in REV x -1 mode, and confirm that the above specification is satisfied. If it is not, adjust the following items.
2. Rotate the T4 nut 45 degrees each and confirm the specification and repeat this adjustment until the specification is satisfied.
3. Specification: CTL level in REV x -1 speed is more than 75 % of Playback CTL level.
Tape runs in lower limit at T3 Post, and tape has no curling and bending at T3, T4 upper and lower limit.
4. If the Specification is not satisfied, use height adjustment tool.

T4 Nut Adjustment Direction

T4 Nut Adjustment Direction	REV CTL Output	REV T3 Post Lower Limit
CW	Increase	More
CCW	Decrease	Less

Post Limit

Post	Tape Limit					
	A	B	C	D	E	F
T3Post	NG	NG	OK	NG	NG	NG
T4Post	OK	OK	OK	NG	NG	NG



1-23. CTL PLAY Output Level Confirmation

Specification	Refer to Figure
Test Point	TP30 (SERVO:F1)
Mode	PLAY
Tape	VFM3580KM(No.1)
M. EQ.	Oscilloscope

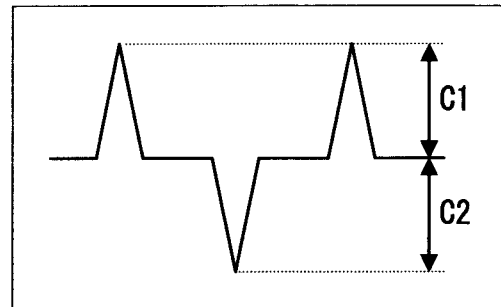
A/C Head must be fixed.

1. Set the VTR to 25M Mode, and playback an Alignment Tape. Then observe the CTL.
2. The CTL level is in the specifications in the following table.

CTL Output Level C1,C2

PLAY	REV × 1	REV × 0.2
$C1, C2 \geq 1.8V$	$C1, C2 \geq 1.4V$	$C1, C2 \geq 1.2V$

1. If the PLAY Output Level is NG. Then confirm the A/C Head Height.
2. If the REV Output Level is NG. Then confirm the T4 Post Height.

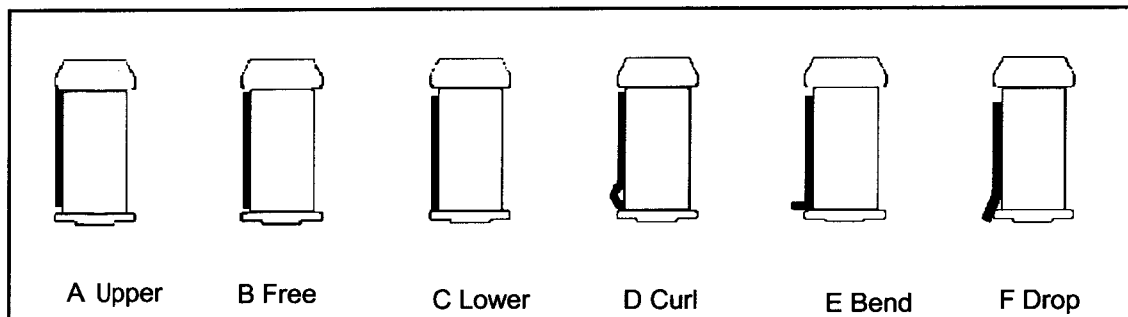


1-24. PLAY Mode Limit Confirmation

Specification	Confirm the each Post Limit is in the following table.
Mode	PLAY
Tape	M Cassette (MP Tape) Tape begin / Tape end

Post	Tape Limit (Refer to Figure)						Adjustment Point	
	A	B	C	D	E	F		
S5 Post	NG	OK	OK	NG	NG	NG	S4, S5Post	Post Height Pre-Adj.
(S4) Tension Post	NG	NG	OK	NG	NG	NG		
S1 Post	OK	NG	NG	NG	NG	NG	S1Post	Envelope waveform Adj.
T1 Post	OK	NG	NG	NG	NG	NG	T1Post	Envelope waveform Adj.
T3 Post	NG	NG	OK	NG	NG	NG	A/C Head Tilt	A/C Head Tilt Adj.
T4 Post	NG	OK	OK	NG	NG	NG	T4 Post	Post Height Pre-Adj.

1. Playback a Tape, and confirm the tape limit at each post is as shown in the above table.
2. If it is not adjust each item according with the Adjustment Point in the above table.

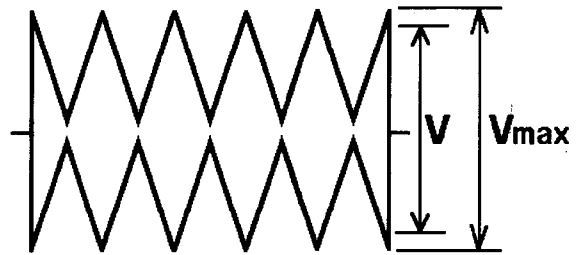


1-25. REV/REW/FF Envelope Confirmation

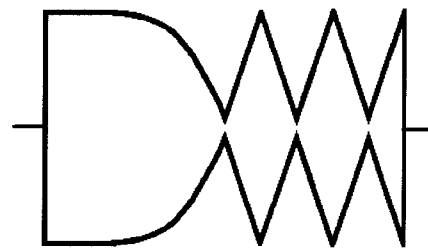
Specification	Refer to Figure
Test Point	TP201 ENV (RFEQ:H3)
Mode	REV, REW, FF
Tape	VFM3580KM (No.1)
M. EQ.	Oscilloscope

1. Place the VTR in REV, REW, FF and confirm that the Waveform is the same diamond style.
2. Peak level V is always in the following specification.

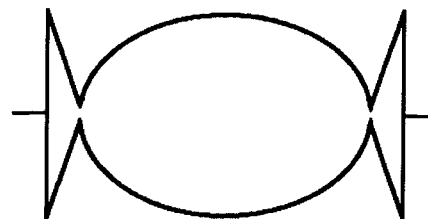
$$V/V_{max} \geq 0.9$$
3. If it is not confirm the S4 Post Height.



OK



NG

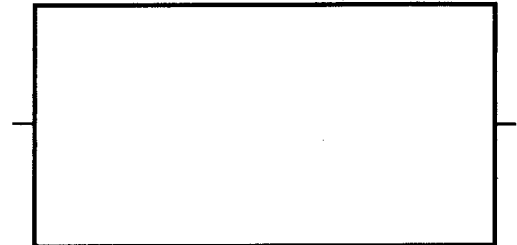


1-26. Envelope Confirmation

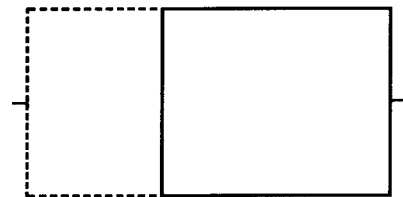
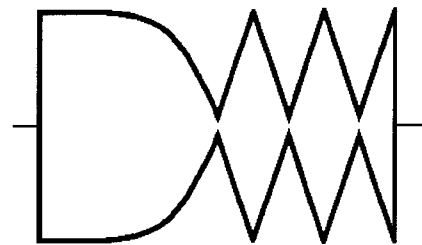
Test Point	TP201 ENV (RFEQ:H3)
Mode	REW/REV to PLAY Loading completion to PLAY FF to PLAY
Tape	L cassette (123 min pre-recorded) Tape begin
M. EQ.	Oscilloscope

This Adjustment must be done after "Envelope waveform Adjustment".

1. Confirm that the envelope waveform becomes stable immediately in the following transition mode, REW to PLAY, REV to PLAY, FF to PLAY, Loading completion to PLAY.
2. If it is not, confirm S4 Post Height.



OK



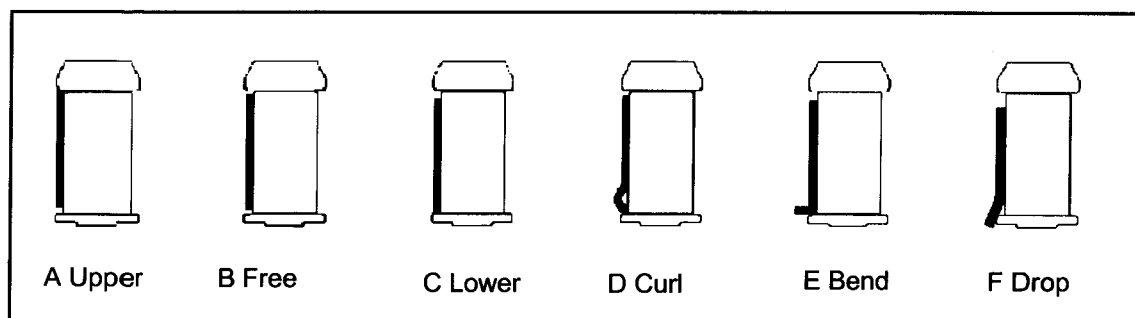
NG

1-27. REV Limit Confirmation

Specification	Confirm the Post Limit is as shown in the following table.
Mode	REV
Work Tape	M Cassette (MP Tape) Tape begin and Tape end

Post	Tape Limit (Refer to Figure)					
	A	B	C	D	E	F
S5 Post	OK	OK	OK	NG	NG	NG
Tension Post	NG	OK	OK	NG	NG	NG
S1 Post	OK	NG	NG	NG	NG	NG
T1 Post	OK	OK	OK	NG	NG	NG
T3 Post	NG	NG	OK	NG	NG	NG
T4 Post	NG	NG	OK	NG	NG	NG

1. Run a tape in Reverse mode and confirm that the tape limit is as shown in the above table.
2. This confirmation is done after each adjustment.

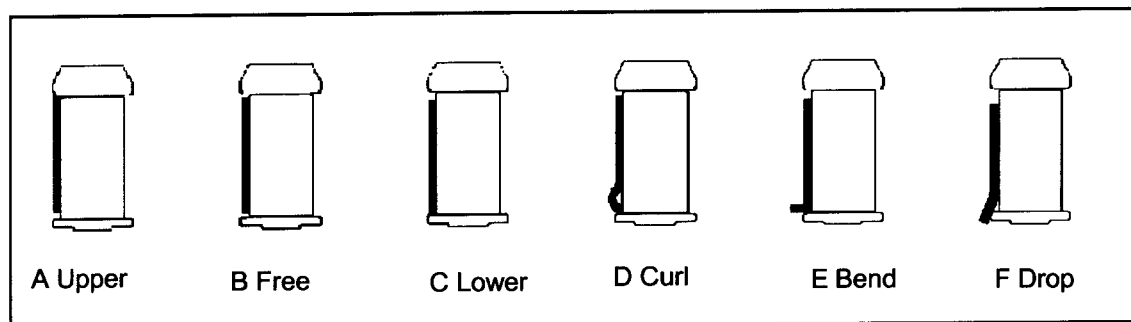


1-28. FF, REW Limit Confirmation

Specification	Confirm the Post Limit is as shown in the following table.
Mode	FF, REW
Work Tape	M Cassette (MP Tape) Tape begin and Tape end

Post	Tape Limit (Refer to Figure)					
	A	B	C	D	E	F
S5 Post	OK	OK	OK	NG	NG	NG
Tension Post	NG	OK	OK	NG	NG	NG
S1 Post	OK	NG	NG	NG	NG	NG
T1 Post	OK	OK	OK	NG	NG	NG
T3 Post	OK	OK	OK	NG	NG	NG
T4 Post	OK	OK	OK	NG	NG	NG

1. Run a tape in FF, REW mode and confirm that the tape limit is as shown in the above table.
2. This confirmation is done after each adjustment.

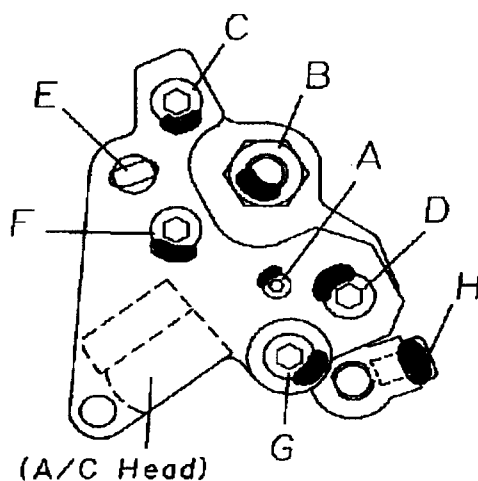


1-29. A/C Head and T3, T4 Post Screw Grew

[A/C Head Screw Grew]

	Screw A	Other Screw
Grew amount	About 3 mm	About 5 mm

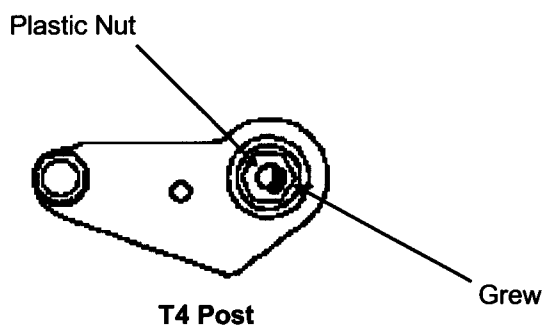
1. Grew after A/C Head Adjustment.
2. Remove the screw grew before Adjustment.



[T3 Post, T4 Post Grew]

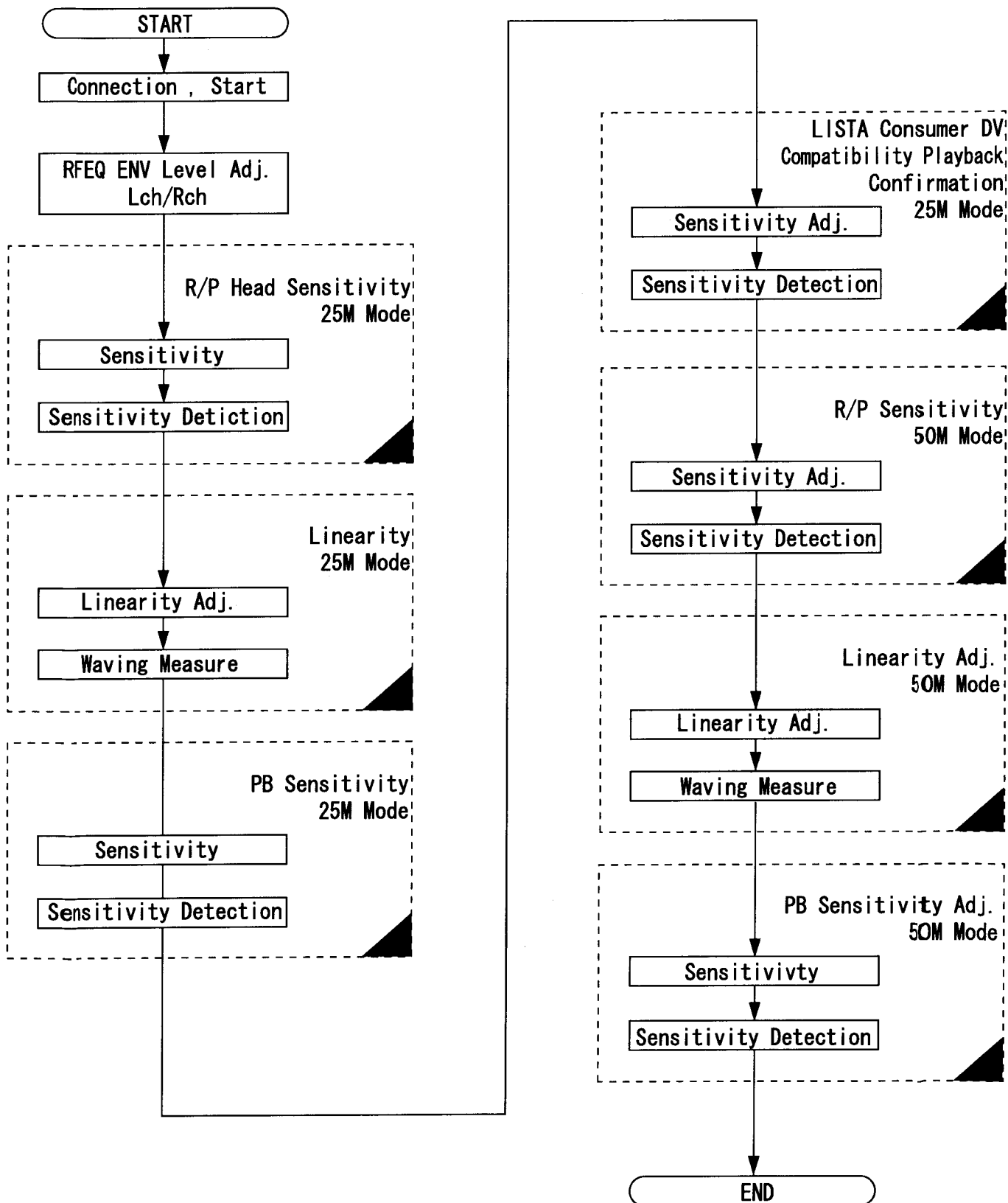
	T3 Post	T4 Post
Grew amount	About 3 mm	About 5 mm

1. After A/C Head Adjustment, grew the Plastic Nut part of T3 and T4 posts.
2. Remove the screw grew before Adjustment.



1-30. LISTA

LISTA Process



1-31. LISTA Connection and Start

Test Point	TP732 ATF ERR (SERVO:F1) TP722 R/P HSW (SERVO:F1) TP723 PB HSW (SERVO:F1) TG510 GND (SERVO:F1)
M. EQ.	PC (AD Board must be installed.), Oscilloscope
Tape	VFM3580KM (ENV LEVEL), VFM3581KM (LISTA)
Tool	VFK1481 (LISTA Software), VFK1186(LISTA Cable)

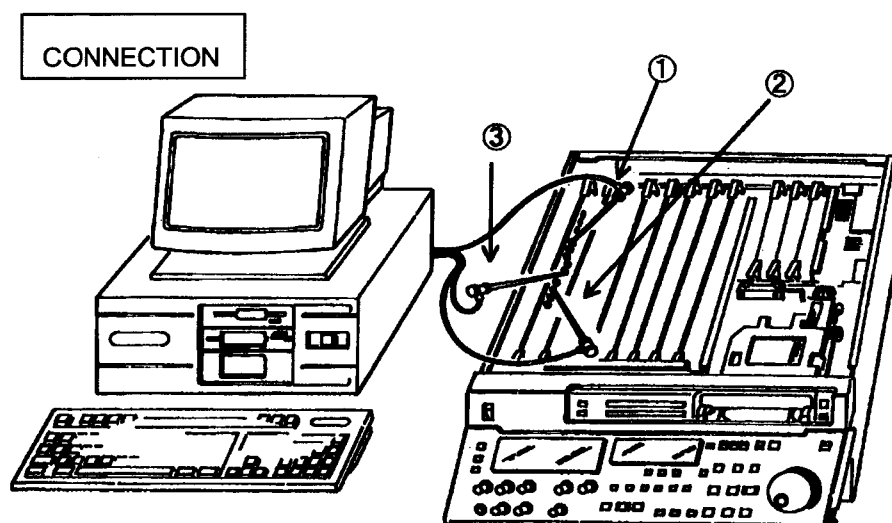
1. Connect the LISTA cable with the A/D board in the PC.

2. Connect the LISTA clips to the following Test Points.

(1) ATF:TP732 (F1)

(2) HSW:TP722(RP HSW) or TP723(PB HSW)

(3) GND:TG510



3. Run the LISTA software.

Installation and Operation

Make a directory like C:LISTA and copy the all files in the floppy disk of VFK1481.

Type Lista.exe in the DOS mode to run the LISTA software.

4. Select the model of AJ-D940 in the menu.

5. Select a alignment tape to use LISTA Adjustment. If it is not displayed choose one of the listed tape and type Y ((Y)es or (N)o) and resist the data which is supplied with the alignment tape.

1-32. Alignment Tape Data Registration

1. Select <4> Alignment Tape in the LISTA software main menu.
 2. Select <2> ENTRY in the Alignment Tape Menu.
 3. When << Alignment tape Data Entry >> is displayed, input the tape serial number according with the menu instruction. The serial number is stumped on the alignment tape. Then select the PAL or NTSC. Type 0 or ENTER to choose DVCPRO.
 4. Then input the all data (37 items for NTSC) and check sum. IF the data is incorrect registration is not completed so check and input again.
- After data registration select <1> SELECT.

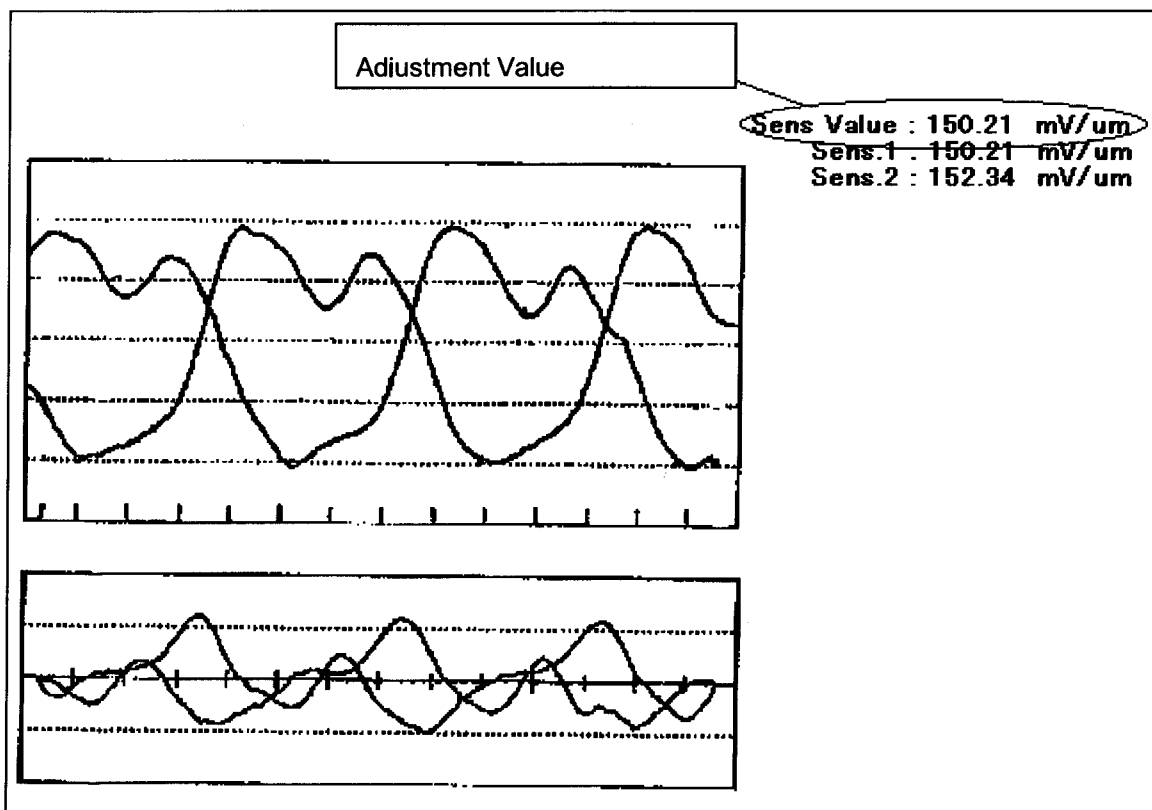
1-33. RP Head Sensitivity Adjustment (25M Mode)

Specification	Sensitivity 150 ± 15 (mV/um)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu:"A09 RP GAIN P"
Tape	VFM3581KM or VFM3581KL

Before this Adjustment adjust RFEQ (H3/H4) ENV Level Adjustment(L/R).

Set the LISTA software in 25M Mode. Select AJ-D950 in the PC menu and displays the main menu. 25M and 50m mode can be changed by "0" key.

1. Set the VTR in Service Mode to open the service menu and select the item of "A09 RP GAIN DP" in the "SERVO ADJUST" menu.
2. Playback a LISTA alignment tape (VFM3581KM).
3. Select the LISTA (6) ATF Error Signal Monitor and "1.2% Speed..." and type Enter to start the software.
4. When the picture is appeared as shown in figure adjust ATF Gain so that the "Sens. Value:" is in the Specification.
To return the main menu press ESC key.

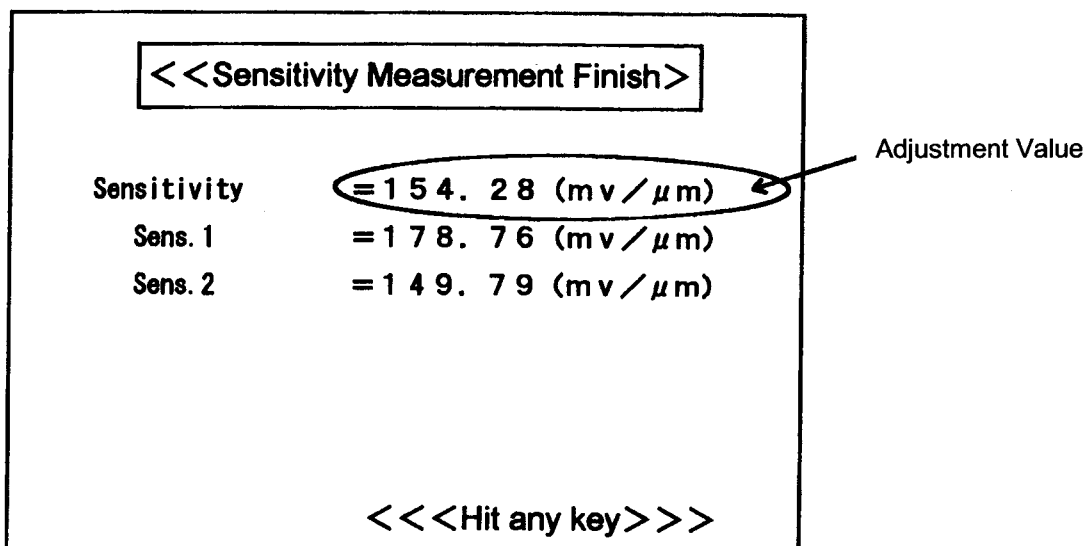


1-34. RP Head Sensitivity Detection (25M Mode)

Specification	Sensitivity 150 ± 15 (mV/ μ m)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu: "A09 RP GAIN DP"
Tape	VFM3581KM or VFM3581KL

Before this adjustment RP Head Sensitivity Adjustment (25M Mode) must be completed.

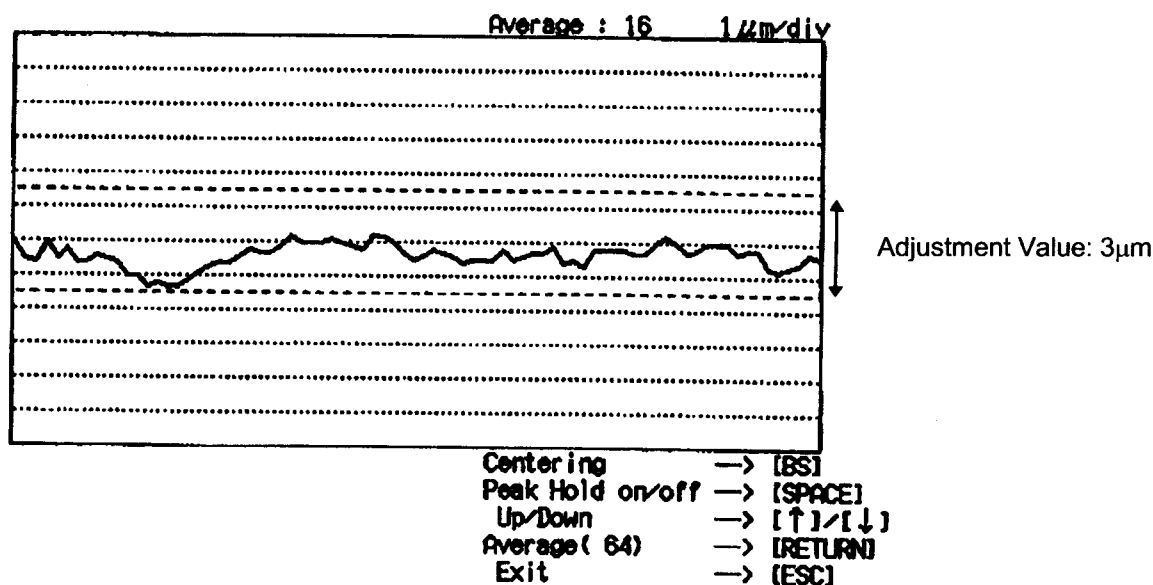
1. Select "A09 RP GAIN DP" in the Service Menu.
2. Playback a LISTA Alignment Tape (VFM3581KM).
3. Select LISTA Main Menu "(1) Sensitivity Measurement" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. Confirm that the specification is satisfied when << Sensitivity Measurement Finish>> and "Sensitivity = sensitivity value" are appeared.



1-35. LISTA Linearity Adjustment and Waving Measurement (25M Mode)

Specification	Linearity is less than 3 μ m, Waving is less than 1.5 μ m.
Mode	SERVO Adjustment Menu:"A10 RP LINEAR DP"
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	S1 and T1 Post Height
Tape	VFM3581KM or VFM3581KL

1. Open the Service Menu and select "A10 RP LINEAR DP" in the "SERVO ADJUST"
2. Playback a LISTA alignment Tape (VFM3581KM).
3. Select "(2) Linearity Measurement" then Linearity waveform is appeared.
4. When the following waveform is appeared press "BS" (Back Space) key to centering the waveform. Adjust S1 and T1 Post Height so that the Linearity waveform is flat. Confirm the ENV waveform is flat.
Red dot lines shows the specification, so linearity waveform should be in the lines.



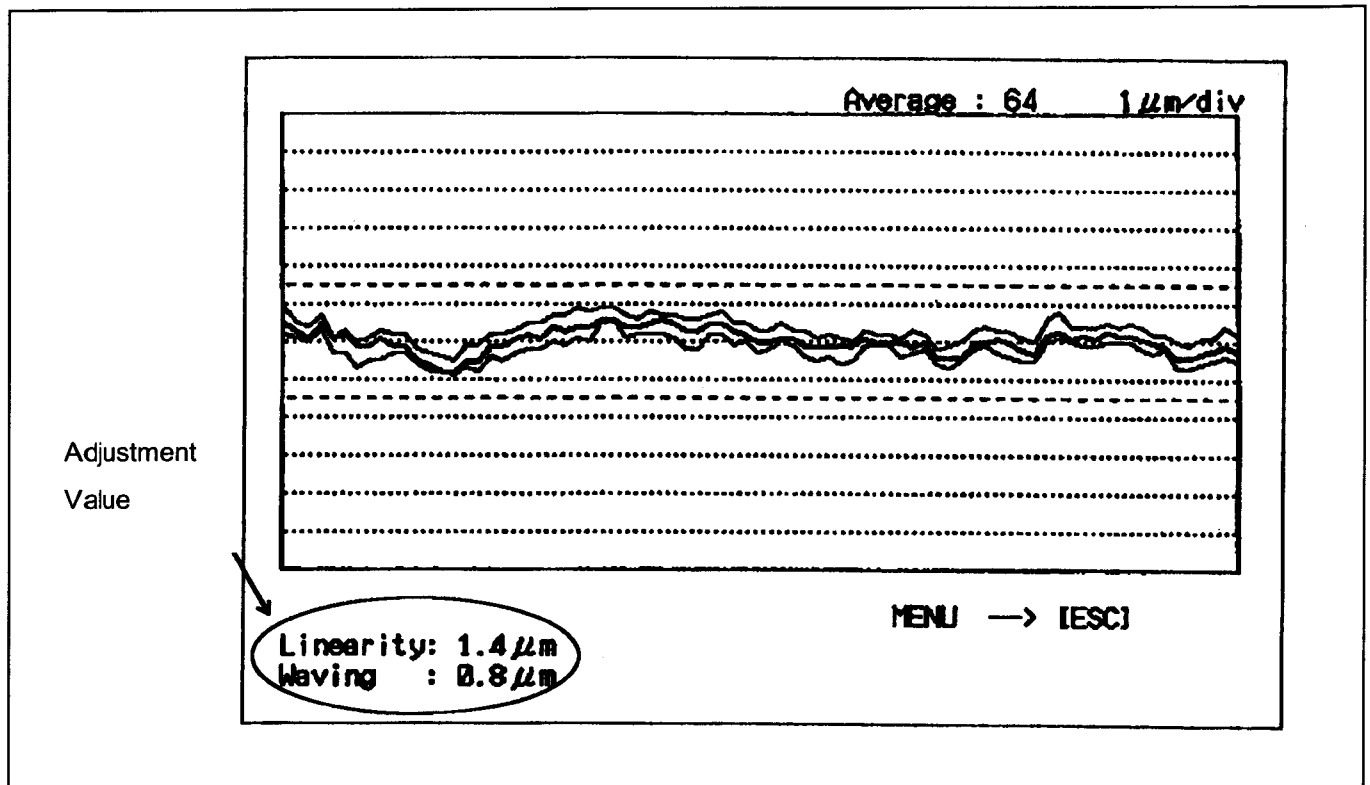
Points

- (1) The left of linearity (Entrance) is changed by S1 Post Height and right of linearity (Exit) is changed by T1 Post Height.
- (2) Lower of the monitor is changed by the lead of the cylinder.
- (3) When the Post Driver is released from the Post linearity may be changed.
- (4) After Adjustment is completed, EJECT the tape end load it again and confirm the waveform is not changed.

5. After the Linearity Adjustment measure the waving.

Waving Measurement

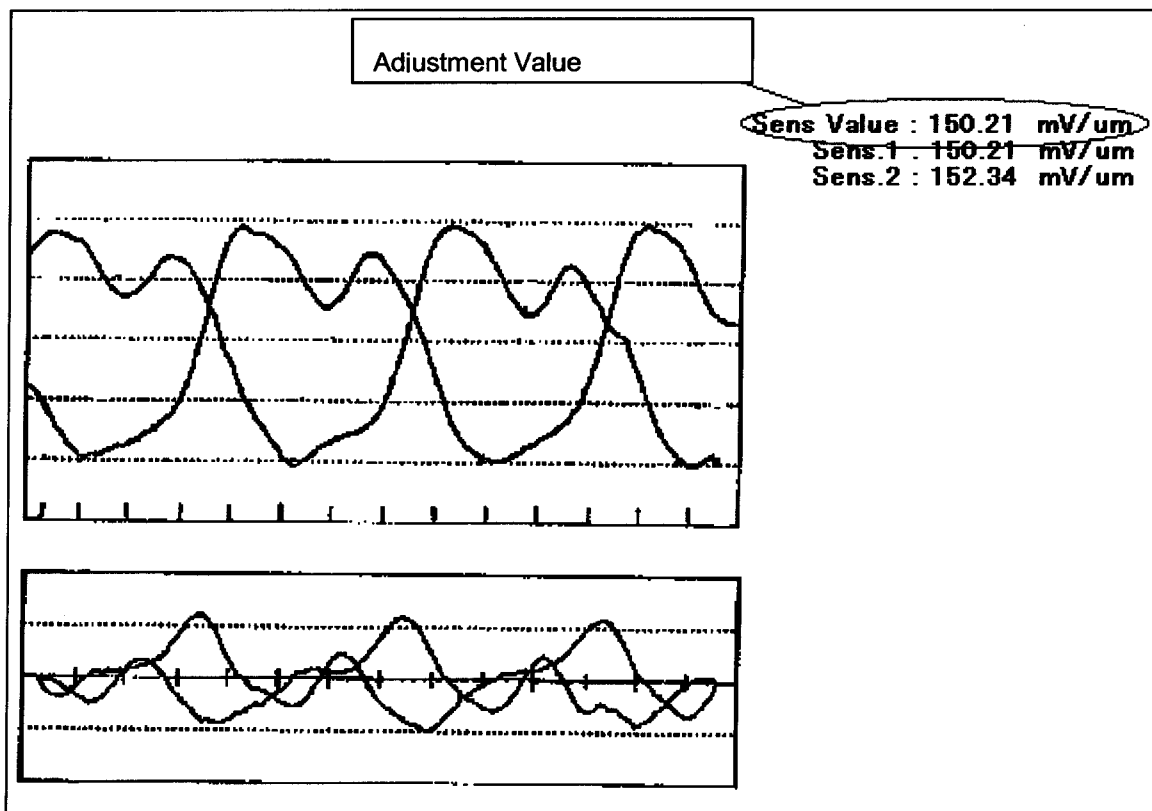
1. While the linearity is displayed on the monitor press "SPACE" key to hold the Peak (30 seconds).
2. Press "SHIFT" and "]" keys together and "Waving" value is displayed at left bottom of the monitor. Then confirm the waving is 1.5 μm or less, and the waving is constant from the entrance to exit. If the waving is out of specification adjust S1 (Entrance) and T1 (Exit) Post Height.
3. After measurement press ESC key to return the main menu.



1-36. PB Head LISTA Sensitivity Adjustment (25M Mode)

Specification	Sensitivity 150 ± 15 (mV/um)
Mode	SERVO Adjustment Menu "A11 PB GAIN DP"
Test Point	(1) ATF:TP732 (2) HSW:TP723(PB HSW) (not TP722(RP HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu: "A11 PB GAIN DP"
Tape	VFM3581KM or VFM3581KL

1. Open the Service Menu and select "A11 PB GAIN DP" in the "SERVO ADJUST" menu.
2. Playback a LISTA alignment Tape (VFM3581KM).
3. Select LISTA Main Menu "(6) ATF Error Signal Monitor" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. When the picture is appeared as shown in figure adjust ATF Gain so that the "Sens. Value:" is in the Specification.
5. After Adjustment press ESC key to return the main menu.

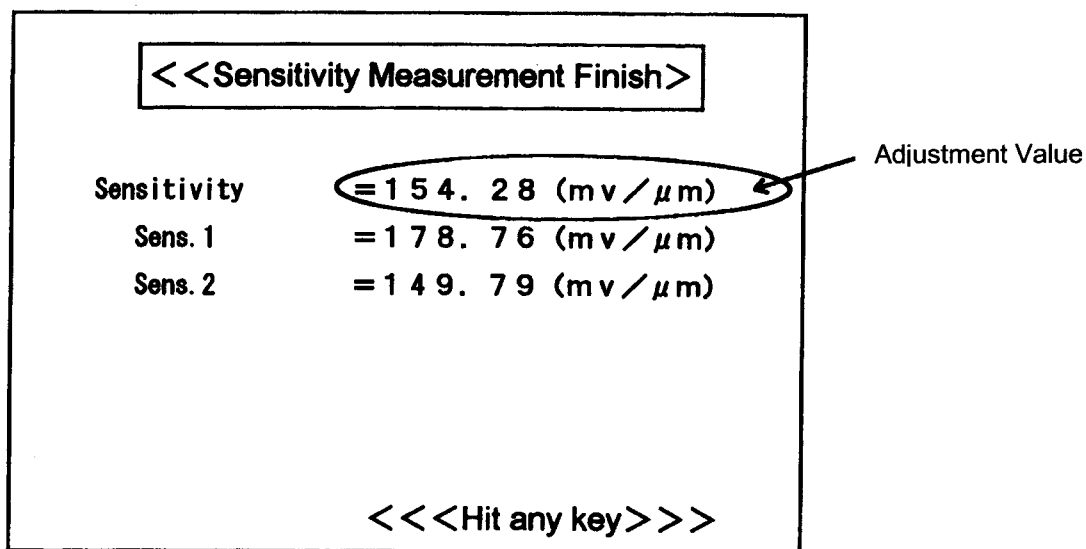


1-37. PB Head Sensitivity Detection (25M Mode)

Specification	Sensitivity 150 ± 15 (mV/ μ m)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP723(PB HSW) (not TP722(RP HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu:"A09 RP GAIN P"
Tape	VFM3581KM or VFM3581KL

Before this adjustment PB Head Sensitivity Adjustment (25M Mode) must be completed.

1. Open the Service Menu and select "A11 PB GAIN DP".
2. Playback a LISTA alignment tape (VFM3581KM).
3. Select LISTA Main Menu "(1) Sensitivity Measurement" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. Confirm that the specification is satisfied when << Sensitivity Measurement Finish>> and "Sensitivity = sensitivity value" are appeared.



1-38. LISTA Consumer DV Compatibility Playback Confirmation

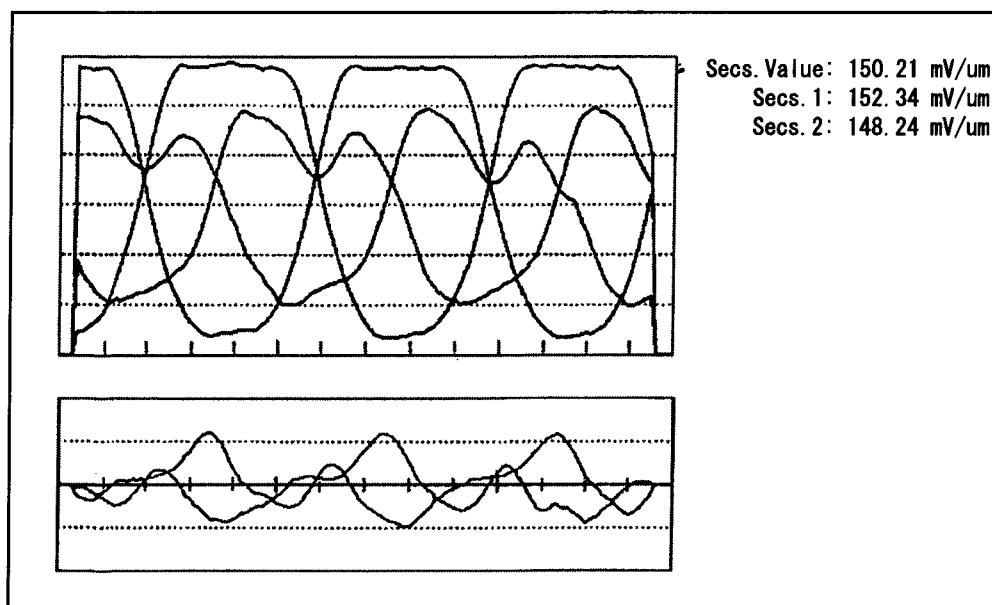
Specification	Sensitivity 130 ± 30 (mV/um)
Mode	Servo Adjustment Menu: "A08 RP GAIN"
Test Point	TP321: ATF Error (Servo Board: F1) TP233: HSW_R/P (Servo Board: F1) TP510: GND (Servo Board: F1)
Adjustment	LISTA Set
Tape	VFM3000EDS (LISTA Master Tape for consumer DV)

1. Select "A08 RP GAIN" of the Servo Adjustment menu.
2. Select "(4) LISTA Alignment Tape" of LISTA menu and Select the "NTSC or PAL" number of DV tape number which is used for adjustment.

Note: The Alignment tape (VFM3000EDS) is common use NTSC and PAL.

Please be careful select the "NTSC" or "PAL" on the above menu, which is follow the VTR.

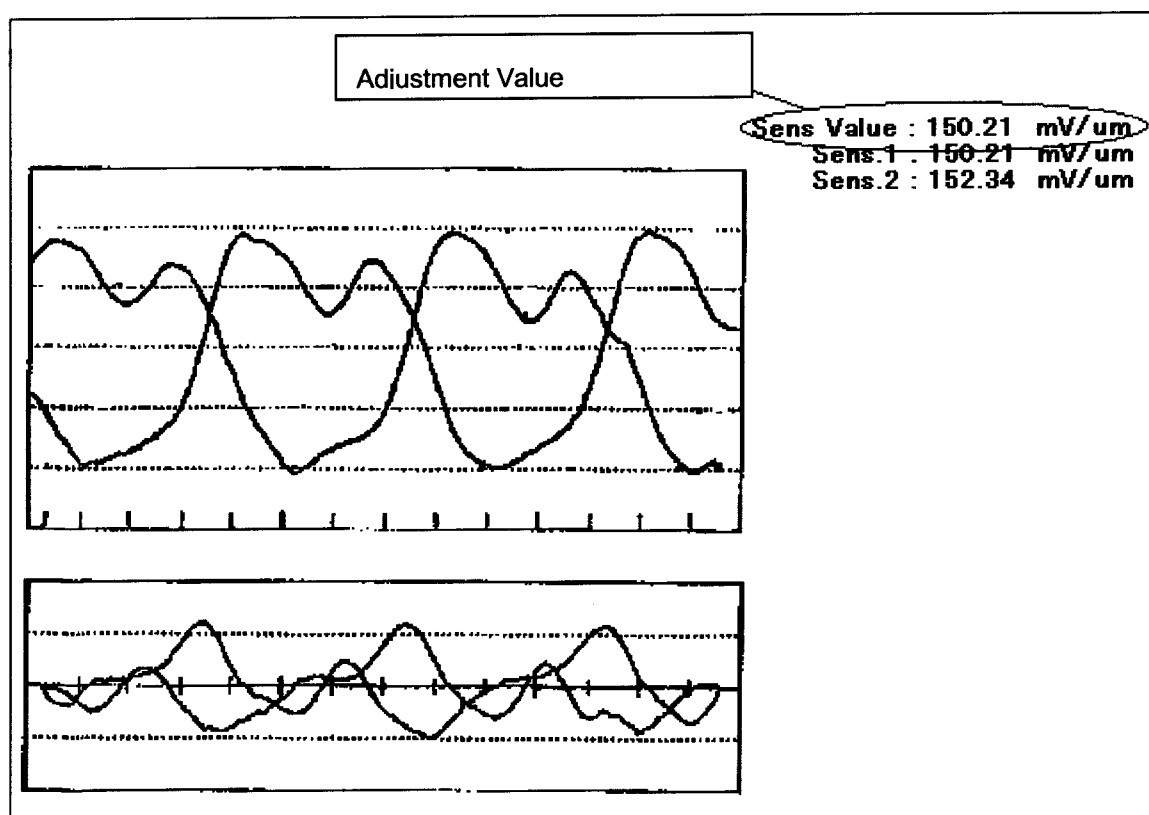
3. Playback the consumer DV LISTA master Tape.
4. Select the "(6) ATF Error Signal Monitor" and display the sensitivity data.
5. When the sensitivity data is displayed, adjust ATF Gain so that the sensitivity value at the upper-left on the monitor is in the specification.
6. ATF Gain is adjusted by rotating the JOG Dial while pressing the JOG/SHTL key.
7. After completion of adjustment, press ESC key to return menu and select (1) sensitivity Measurement.
8. Confirm the sensitivity value is in the specification.



1-39. RP Head Sensitivity Adjustment (50M Mode)

Specification	Sensitivity 150 ± 15 (mV/um)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu:"A05 RP GAIN ED"
Tape	VFM3581KM or VFM3581KL

1. Set the LISTA software in 50M Mode. Select AJ-D950 in the PC menu and displays the main menu. 25M and 50m mode can be changed by "0" key.
2. Open the SET-UP Menu and set #012: 422 #013: MANUAL.
3. Set the VTR in Service Mode to open the service menu and select the item of "A05 RP GAIN ED" in the "SERVO ADJUST" menu.
4. Playback a LISTA alignment tape (VFM3581KM).
5. Select the LISTA (6) ATF Error Signal Monitor and "1.2% Speed..." and type Enter to start the software.
6. When the picture is appeared as shown in figure adjust ATF Gain so that the "Sens. Value:" is in the Specification.
To return the main menu press ESC key.

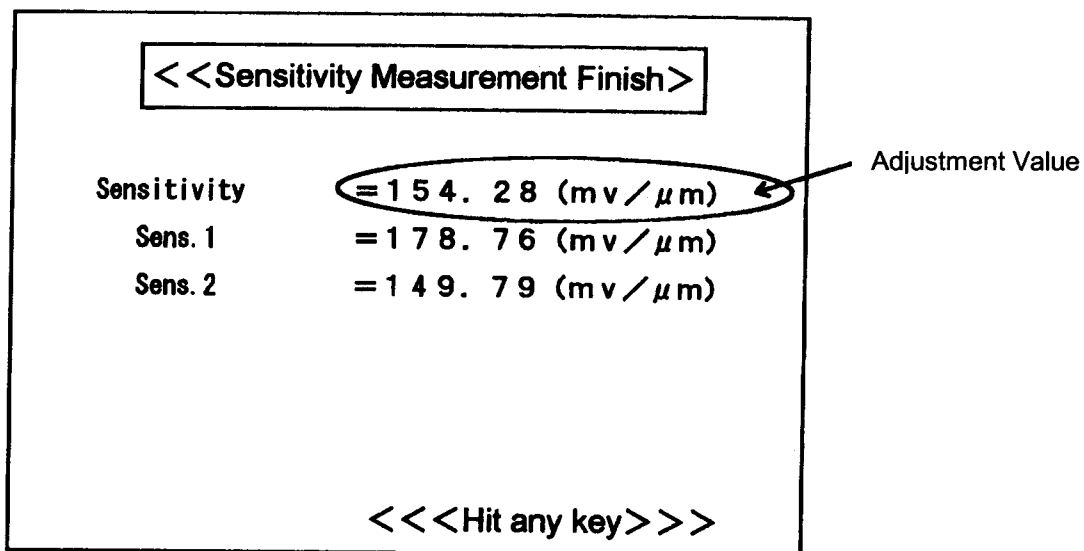


1-40. RP Head Sensitivity Detection (50M Mode)

Specification	Sensitivity 150 ± 15 (mV/ μ m)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu: "A05 RP GAIN ED"
Tape	VFM3581KM or VFM3581KL

Before this adjustment RP Head Sensitivity Adjustment (25M Mode) must be completed.

1. Select "A05 RP GAIN ED" in the Service Menu.
2. Playback a LISTA Alignment Tape (VFM3581KM).
3. Select LISTA Main Menu "(1) Sensitivity Measurement" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. Confirm that the specification is satisfied when << Sensitivity Measurement Finish>> and "Sensitivity = sensitivity value" are appeared.

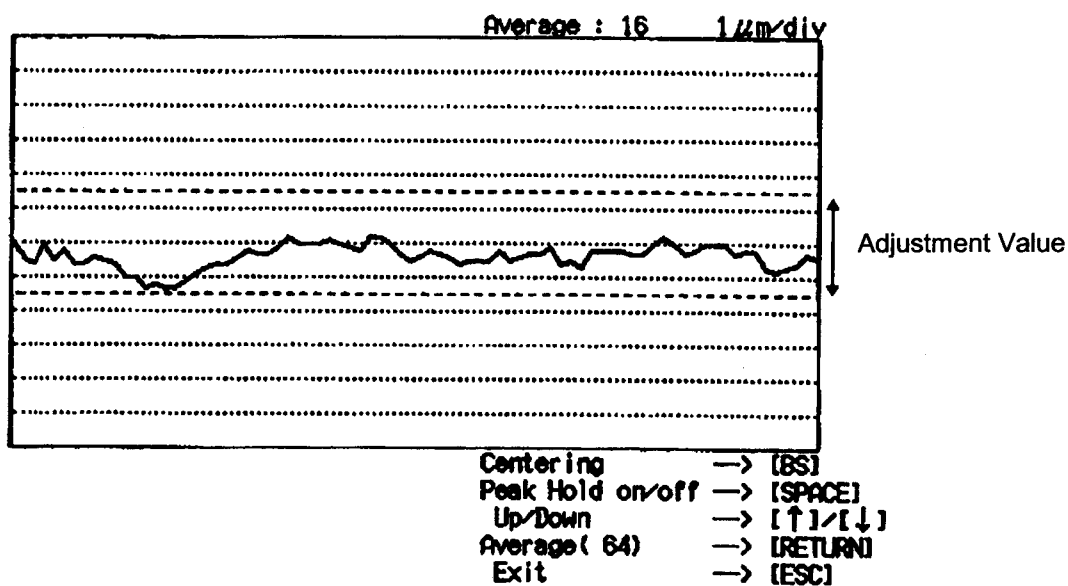


1-41. LISTA Linearity Confirmation and Waving Measurement (50M Mode)

Specification	Linearity is less than 3 μ m, Waving is less than 1.5 μ m.
Mode	SERVO Adjustment Menu:"A06 RP LINEAR ED"
Test Point	(1) ATF:TP732 (2) HSW:TP722(RP HSW) (not TP723(PB HSW) (3) GND:TG510
Adjustment	S1 and T1 Post Height
Tape	VFM3581KM or VFM3581KL

1. Open the Service Menu and select "A06 RP LINEAR ED" in the "SERVO ADJUST"
2. Playback a LISTA alignment Tape (VFM3581KM).
3. Select "(2) Linearity Measurement" then Linearity waveform is appeared.
4. When the following waveform is appeared press "BS" (Back Space) key to centering the waveform. Adjust S1 and T1 Post Height so that the Linearity waveform is flat. Confirm the ENV waveform is flat.

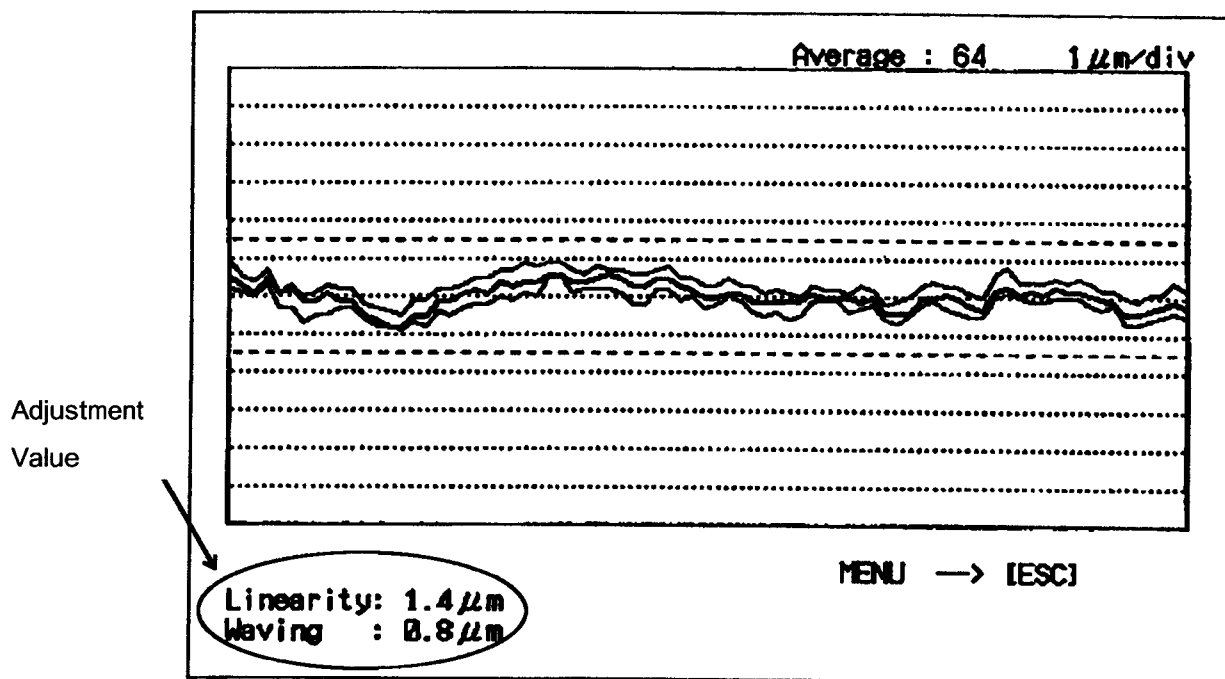
Red dot lines shows the specification, so linearity waveform should be in the lines.



After the Linearity Adjustment measure the waving.

Waving Measurement

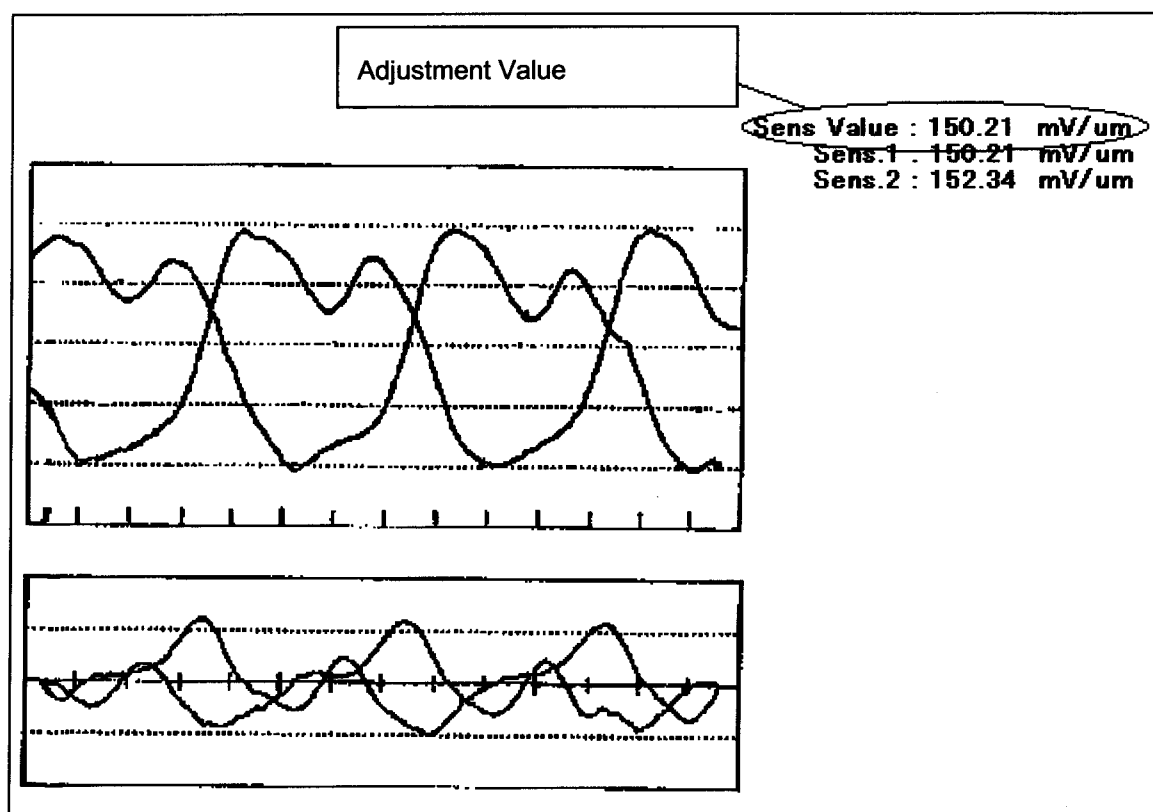
1. While the linearity is displayed on the monitor press "SPACE" key to hold the Peak (30 seconds).
2. Press "SHIFT" and "]" keys together and "Waving" value is displayed at left bottom of the monitor. Then confirm the waving is 1.5 μm or less, and the waving is constant from the entrance to exit. If the waving is out of specification adjust S1 (Entrance) and T1 (Exit) Post Height.
3. After measurement press ESC key to return the main menu.



1-42. PB Head LISTA Sensitivity Adjustment (50M Mode)

Specification	Sensitivity 150 ± 15 (mV/um)
Mode	SERVO Adjustment Menu "A07 PB GAIN ED"
Test Point	(1) ATF:TP732 (2) HSW:TP723(PB HSW) (not TP722(RP HSW)) (3) GND:TG510
Adjustment	SERVO Adjustment Menu: "A07 PB GAIN ED"
Tape	VFM3581KM or VFM3581KL

1. Open the Service Menu and select "A07 PB GAIN ED" in the "SERVO ADJUST" menu.
2. Playback a LISTA alignment Tape (VFM3581KM).
3. Select LISTA Main Menu "(6) ATF Error Signal Monitor" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. When the picture is appeared as shown in figure adjust ATF Gain so that the "Sens. Value:" is in the Specification.
After Adjustment press ESC key to return the main menu.



1-43. PB Head Sensitivity Detection (50M Mode)

Specification	Sensitivity 150 ± 15 (mV/um)
Mode	Playback
Test Point	(1) ATF:TP732 (2) HSW:TP723(PB HSW) (not TP722(RP HSW) (3) GND:TG510
Adjustment	SERVO Adjustment Menu:"A07 PB GAIN ED"
Tape	VFM3581KM or VFM3581KL

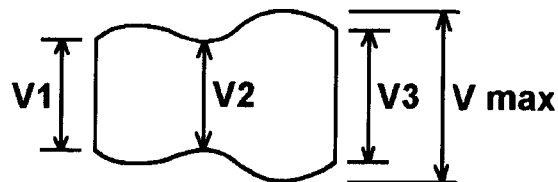
Before this adjustment PB Head Sensitivity Adjustment (50M Mode) must be completed.

1. Open the Service Menu and select "A07 PB GAIN ED".
2. Playback a LISTA alignment tape (VFM3581KM).
3. Select LISTA Main Menu "(1) Sensitivity Measurement" Press enter when "1.2% Speed..." is appeared to start the Sensitivity measurement.
4. Confirm that the specification is satisfied when << Sensitivity Measurement Finish>> and "Sensitivity = sensitivity value" are appeared.

1-44. PLAY Envelope Confirmation

Specification	$V1/V_{max}, V2/V_{max}, V3/V_{max} \geq 0.8$
Test Point	TP201 R/P ENV L:H3/ R:H4
Adjustment	S1,T1PostHeight
Mode	PLAY
Tape	VFM3580KM(No.1)
M. EQ.	Oscilloscope
Tool	VFK1149 (Post Driver-)

1. Playback an alignment Tape.
2. Confirm the R/P Envelope Level is in the specification.
3. If it is not adjust ENV waveform Adjustment and LISTA Adjustment.



2. Measure Parts Replacement and Adjustment

General

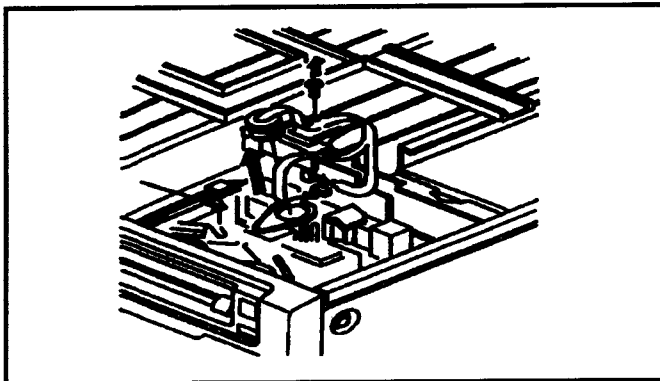
Note the following items for each part replacement.

1. Turn Power Off before replacement.
2. Use the correct tool in the Jigs and Tools list.
3. After replacement clean the VTR according with the cleaning procedures.

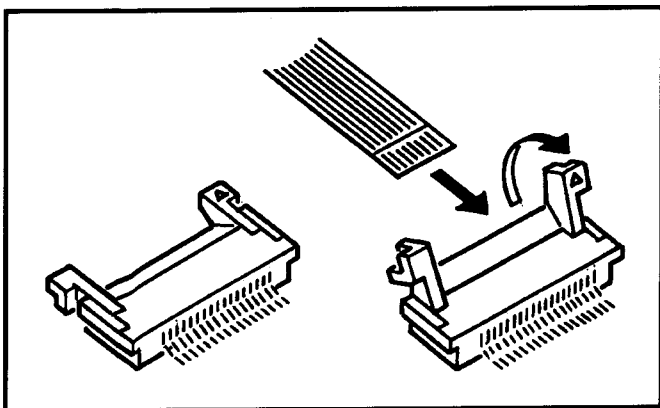
2-1. Cylinder Unit Replacement

(Removal of Cylinder Unit)

1. Remove the T1 guide and cleaning arm unit. (Refer to the cleaning arm unit replacement.)
2. Remove 2 connectors (P5002, P5003) on the Head Buffer board and remove the screw on the flexible cable.

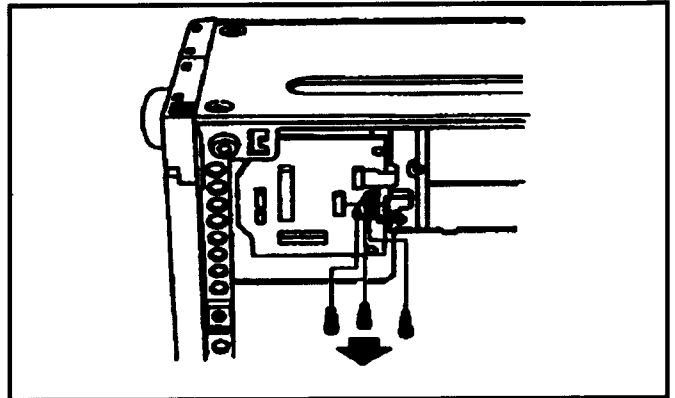


Note: Be careful to remove the flexible cable from the connector. Do not touch on the cylinder surface by finger directly.



3. Remove the connector P33 on the Mech. Interconnection board at bottom of VTR. Then remove 3 screws (with spring) and draw out the cylinder unit without touching any parts.

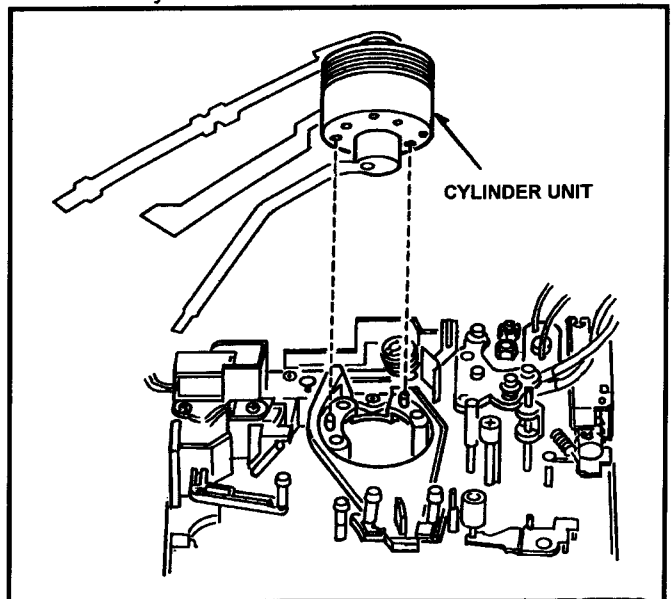
Note: Do not touch the cylinder surface by finger directly.



(Installation of cylinder)

1. Install a Cylinder unit as reverse order of its removal.

Note: Set the Mechanical Chassis pins are matched with the specified cylinder holes on the bottom of the cylinder.



2. After T1 Guide installation, T1 Guide Position Adjustment is necessary. (Refer to Cleaning Arm Unit Replacement and T1 Guide Position Adjustment.)

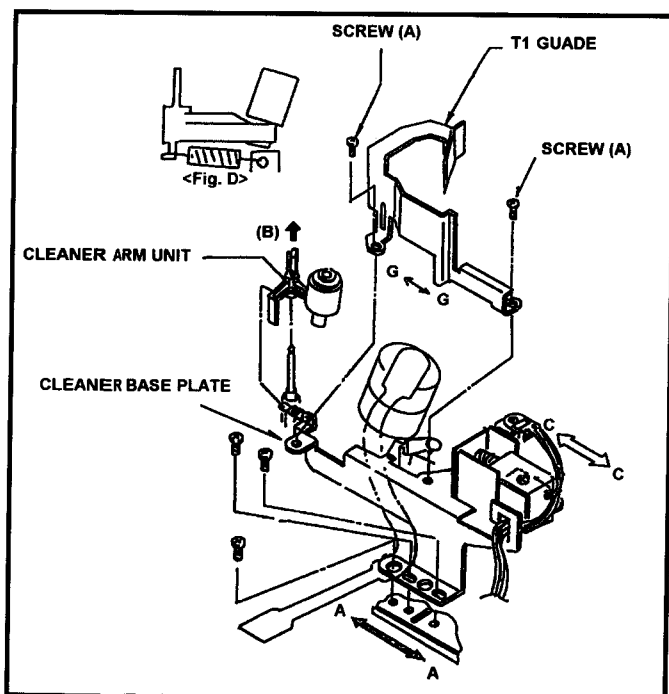
2-2. Cleaning Arm Unit Replacement

(Removal of Cleaning Arm Unit)

1. Remove 2 screws (A) and remove the T1 Guide.
2. Hang off the tip portion (B) of Cleaning Arm Unit and hang off the spring from Cleaning Arm Unit, then remove the Cleaning Arm Unit as shown in the figure.

(Installation of Cleaning Arm Unit)

1. Install a Cleaning Arm Unit to the T2 Arm Unit. Then remove the spring from the cleaner base plate and hook to cleaning arm unit. Push the cleaning arm unit into T2 Arm Unit.
2. Push the Cleaner Solenoid. Rotate the cylinder and confirm that the cleaner roller is rotated by the cylinder movement.
3. Install a T1 Guide.
4. After T1 Guide installation, T1 Guide position adjustment is necessary.

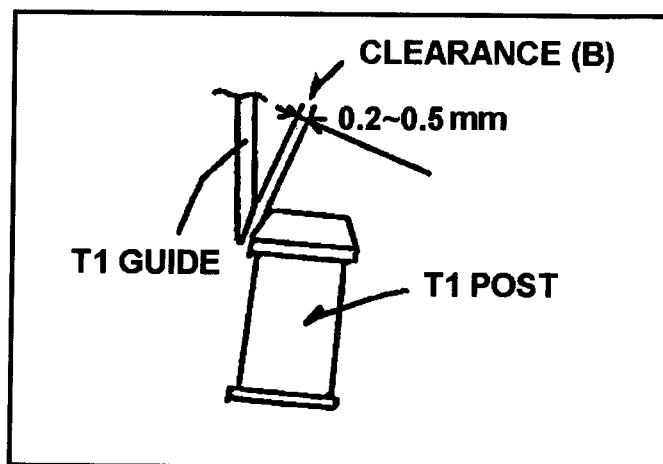


2-3. T1 Guide Position Adjustment

1. Set the VTR in no tape loading mode.

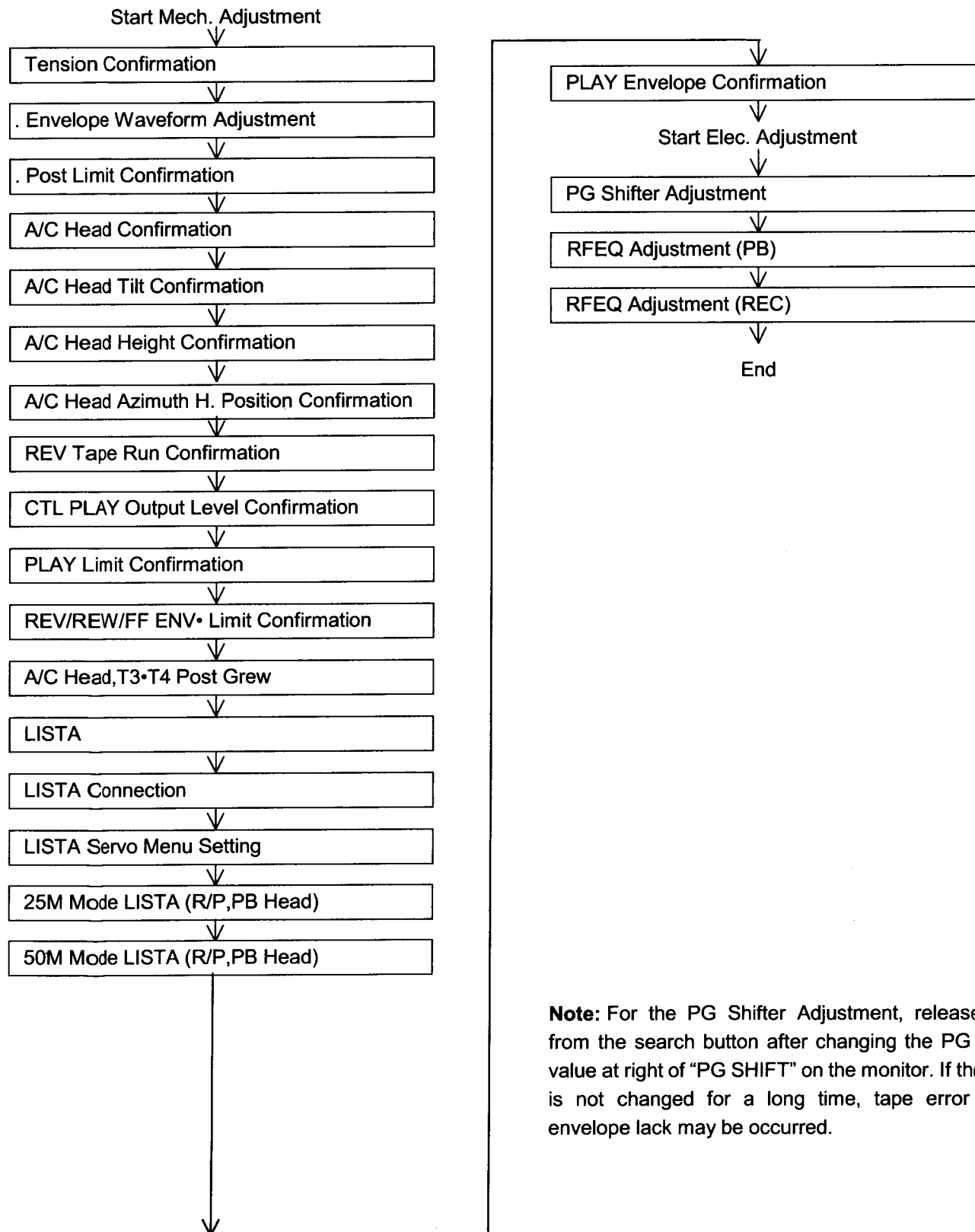
< No tape loading procedures >

- Open the "Servo Adjust" menu in the "Service Menu".
 - Select the item "T TORQUE" and press the search button to make the loading condition. Then turn power off.
2. Confirm that the clearance between T Guide and T1 Post is 0.2 mm to 0.5 mm. (A little clearance is necessary.)
 3. If it is not, loosen the 2 screws (A) and adjust the position of T1 guide by moving arrow direction (B)



2-4. Adjustments after Cylinder Unit Replacement

1. Adjust following items after cylinder unit replacement.



Note: For the PG Shifter Adjustment, release hand from the search button after changing the PG Shifter value at right of "PG SHIFT" on the monitor. If the value is not changed for a long time, tape error or ITI envelope lack may be occurred.

2-5. A/C Head Replacement

Replacement Procedures

Tool

Nut Driver (5.5mm)(VFK1150)

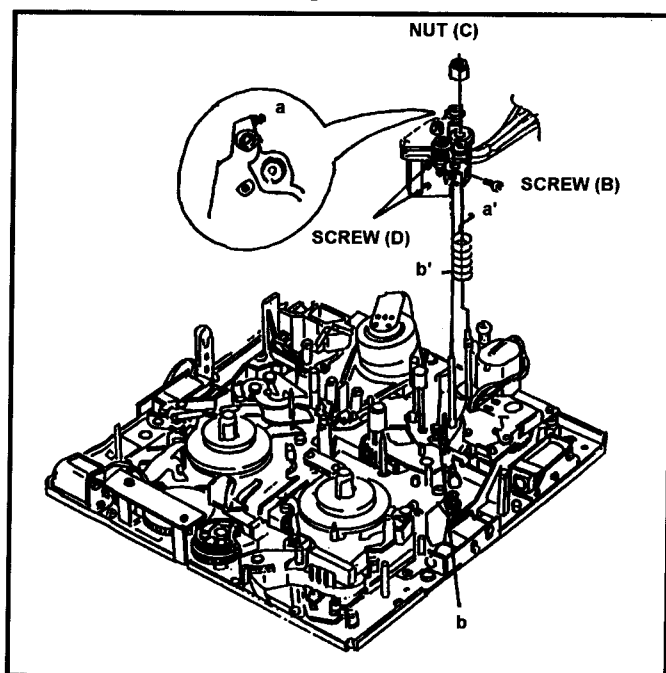
Hex Driver (VFK1148)

Hex Wrench (VFK1190)

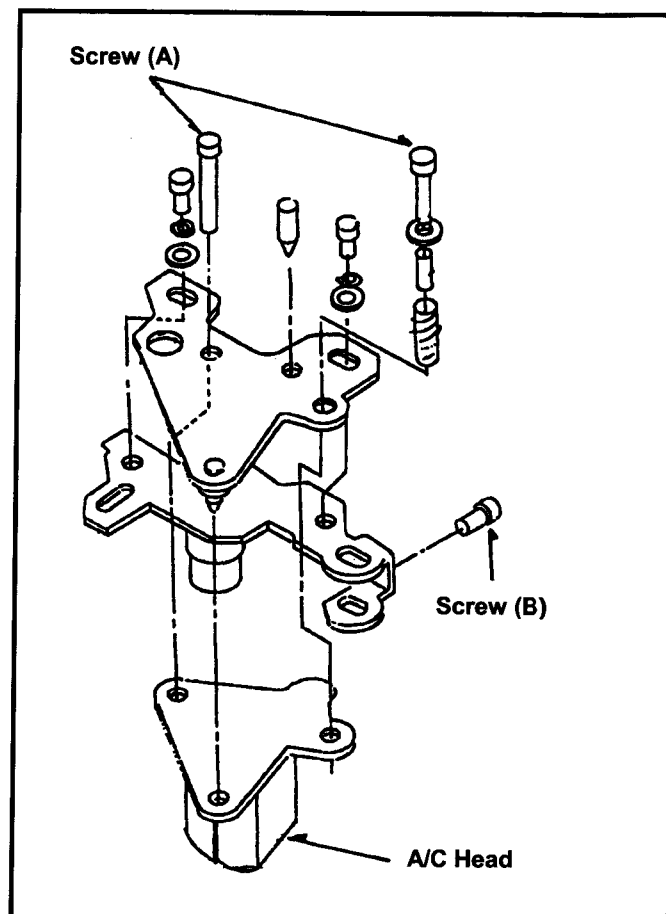
(Removal of A/C Head)

1. Remove the top panel.
2. Loosen the hex screw (B) and remove the nut (C) then hang off the height adjustment spring (a). Remove the A/C Head Unit.

Note: Remember the Nut (C) height before removing it.

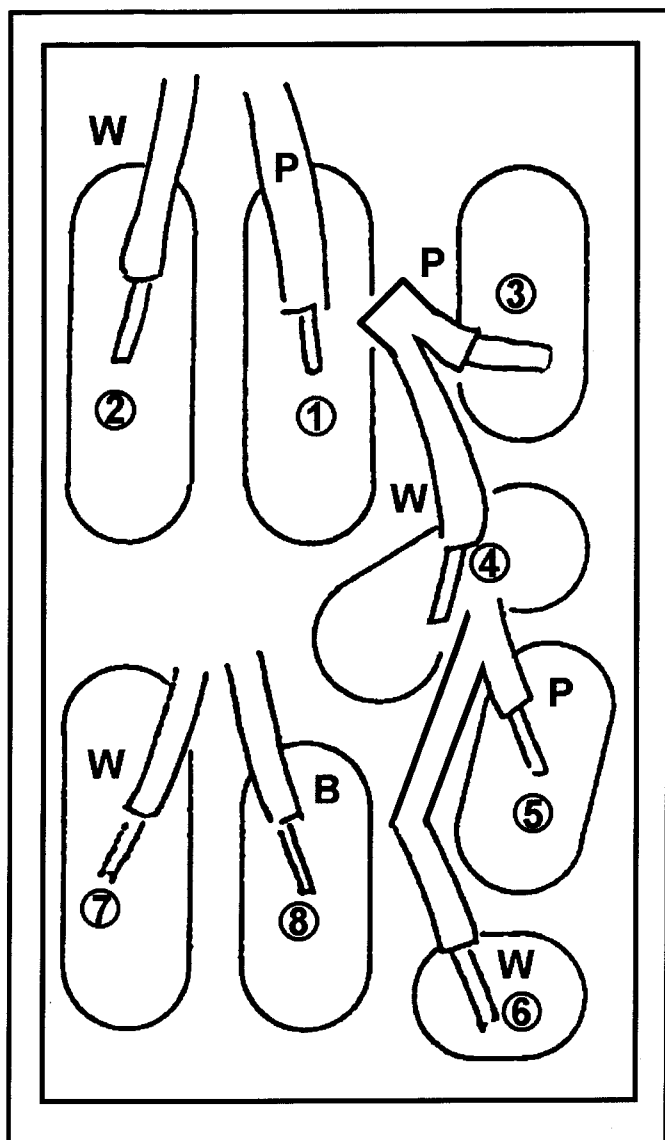


3. Remove 2 screws (A) and remove P1 on AC HEAD I/F board and P2030 on Mech. I/F board, then remove A/C Head.
4. Remove 2 screws (D) and remove the shield case.
5. Unsolder the Lead wire from the A/C Head. (When unsolder the lead wires, do not unsolder all at the same time.)



(Installation of A/C Head)

1. Remove the shield case from a new A/C Head and solder the each lead wires.
2. Install the shield case.
3. Install the A/C head to the A/C head plate by 2 screws (A). Then set to parallel the gap between A/C Head and A/C Head Plate.
4. Install the A/C Head unit.
5. Hang on the Head Height Adjustment Spring and tighten the Nut (C).
6. Clean the surface of the A/C Head.
7. A/C Head Adjustment is necessary.



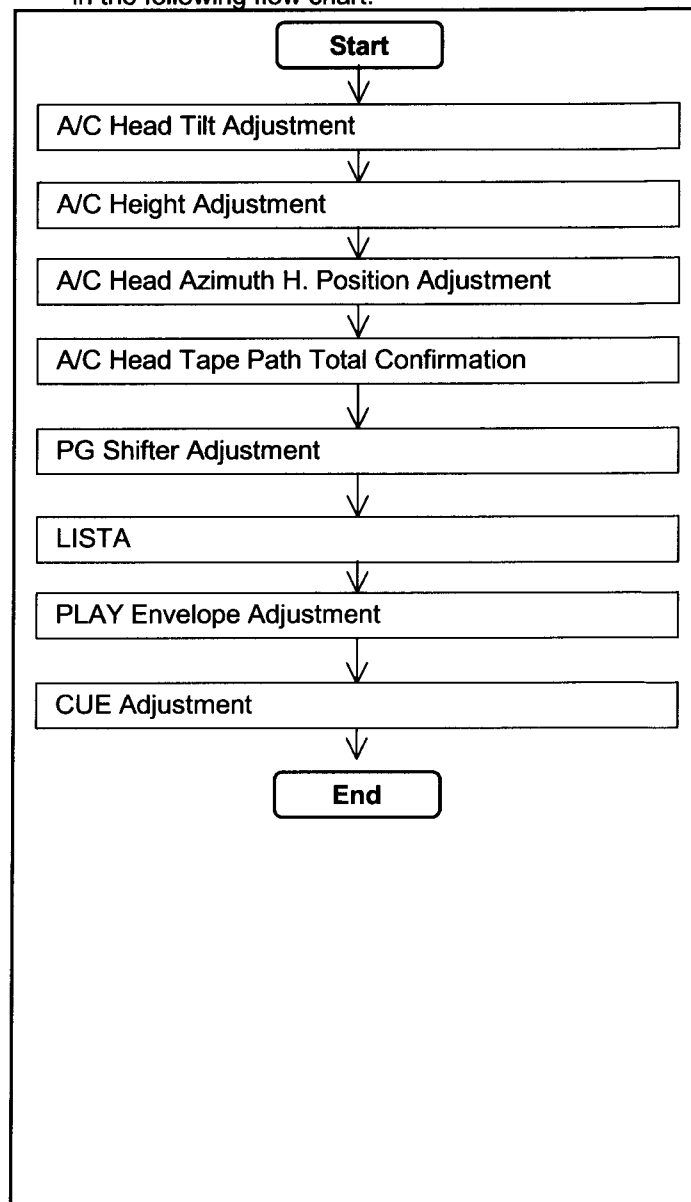
A/C Head Side	Cable Color		Connector No.
1	PINK	YELLOW	P1
2	WHITE		
3	PINK	RED	
4	WHITE		
5	PINK	GREEN	P30
6	WHITE		
7	WHITE	YELLOW	
8	BLACK		

2-6. A/C Head Adjustment

- After A/C Head Replacement, from the item of A/C Head Tilt to the item of A/C head horizontal position adjustment are necessary.

Note: Keep loosen the hex screw (B) at the side of A/C head until A/C head height adjustment completion.

- A/C Head Adjustment and Confirmation are shown in the following flow chart.



2-7. Supply and Take-up Reel Unit Replacement

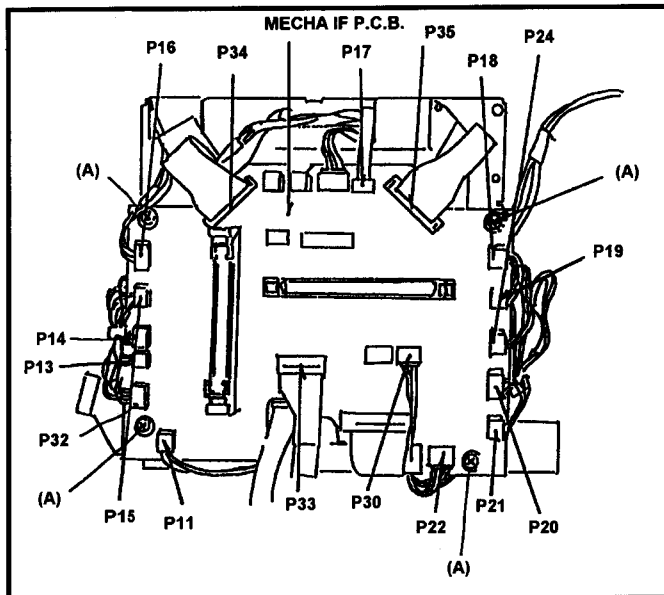
(Removal of Supply and Take-up Reel Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Remove the connector P34 and P35 on the Mech. I/F board.
5. Rotate CW the Red Plastic Screw which is used for manual tape eject and load the S1 Post to make the space for screw (C).
6. Confirm that the S and T brake solenoid iron core are released.
7. Push the M Stopper Solenoid to release the M Stopper.
8. Remove 4 Screws (C), (D) and (E).
9. The Reel Table is hooked with inner rail. Slightly lift the Reel Table so that it does not touch the brake release arm. Then remove the Reel Table.

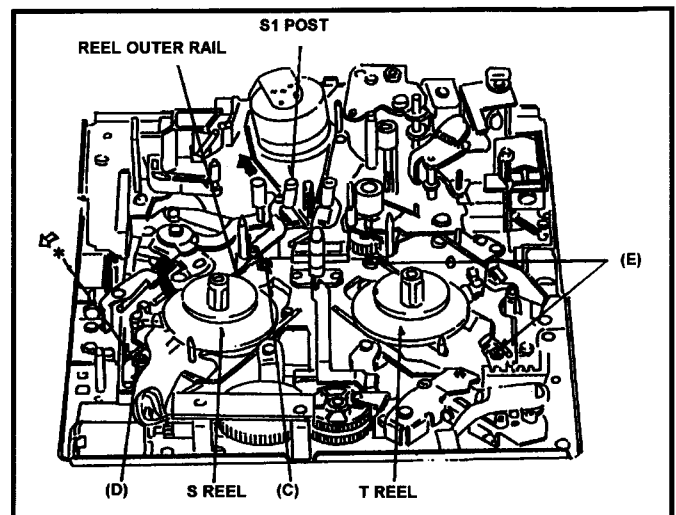
Note: Memorize the groove position of Reel Base which is inserted the pin of Drive Arm Unit. (The position can remember by the attached grease.)

(Installation of Supply and Take-up Reel Unit)

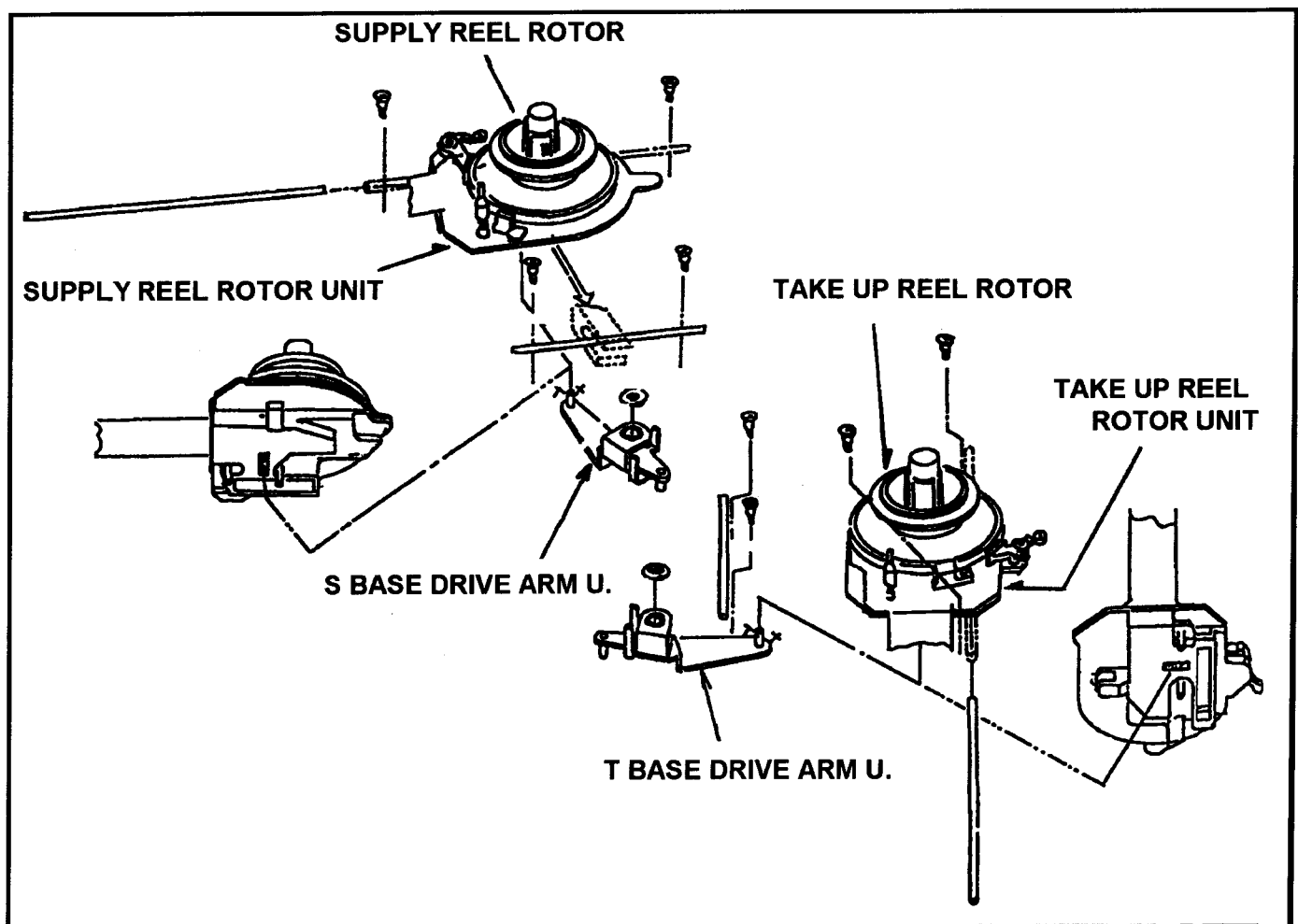
1. Insert the outer rail at the new Reel Table.
2. Hook the Reel Table Unit at the inner rail. Then install a Reel Table so that its groove is matched with the pin of Drive Arm Unit.
3. Tighten 4 screws (C), (D) and (E) then confirm the Reel Table moves smoothly on the Rail by hand.
4. Move the Reel Rotor Unit to front side by hand and pull up the iron core of M stopper solenoid
5. Unload completely by rotating the Red Plastic screw CCW.
6. Insert the flexible cable into P34 and P35 on the Mech. I/F board.
7. Confirm the Main Brake Torque. (Refer to the Main Brake Torque Confirmation.)
8. Adjust the Motor Torque Offset. (Refer to the Motor Torque Offset Adjustment.)
9. Confirm the Tension Value. (Refer to the Tension Confirmation.)



Mech. IF Board



Removal Reel Rotor Unit



Installation of Reel Rotor Unit

2-8. Supply and Take-up Brake Arm Unit Replacement

(Removal of Brake Arm Unit)

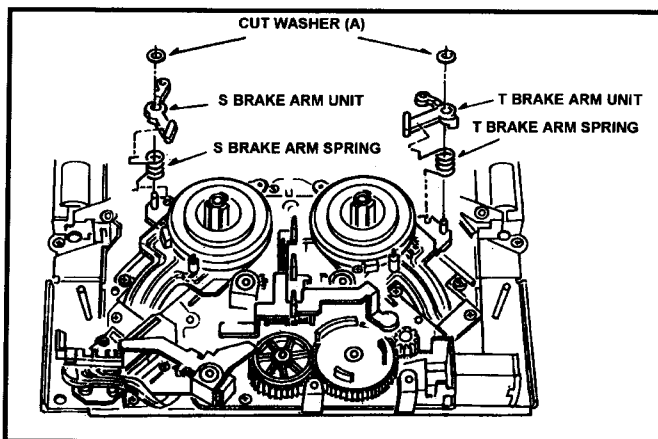
1. Remove the top panel.
2. Remove the front loading unit.
3. Push the supply and take-up brake solenoids to release brake.
4. Remove 2 cut washers (A) and remove supply and take-up brake arm unit.

(Installation of Brake Arm Unit)

1. Install new supply and take-up brake arm units as reverse order of removal.

Note: Hook the brake arm spring at the position shown in the figure.

2. After the Brake Arm Unit Installation, confirm the Main Brake Torque. (Refer to the Main Brake Torque Confirmation.)

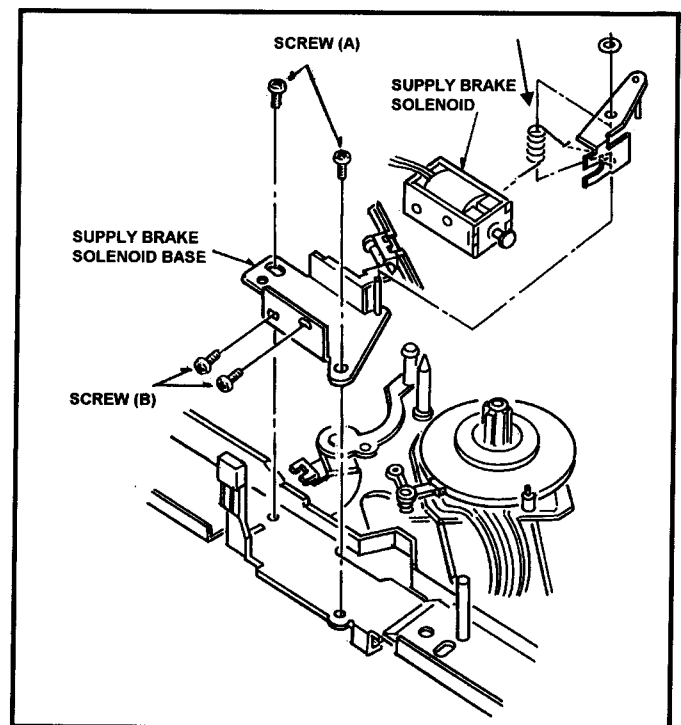


Reel Brake Arm Unit Replacement

2-9. Supply Brake Solenoid Replacement and Adjustment

(Removal of Supply Brake Solenoid)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Remove the connector P15 on Mech. Interconnection board.
5. Remove 2 screws (A) and remove the Supply Brake Solenoid Base Unit.
6. Remove 2 screws (B) and remove the Supply Brake Solenoid from its unit.



Supply Brake Solenoid Removal

(Installation of Brake Solenoid)

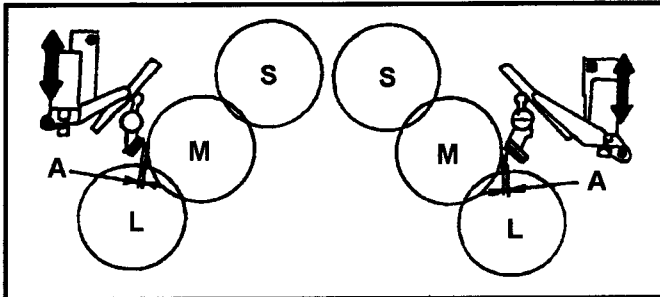
1. Install a new supply brake solenoid as reverse order of its removal.

Note: Set the supply brake spring at the position shown in the figure.

2. After installation, adjust following procedures.

(Adjustment Procedures)

1. Set the Reel Table at M cassette position.
2. Confirm the gap (A) between Brake pad and Turn table is 0.2 mm to 0.5 mm.
3. If the gap (A) is out of specification, loosen 2 screws and adjust brake solenoid unit as arrow direction so that the gap is in the specification.
4. After the above adjustment move the Reel Table to S cassette or L cassette position and confirm the gap is in the specification.

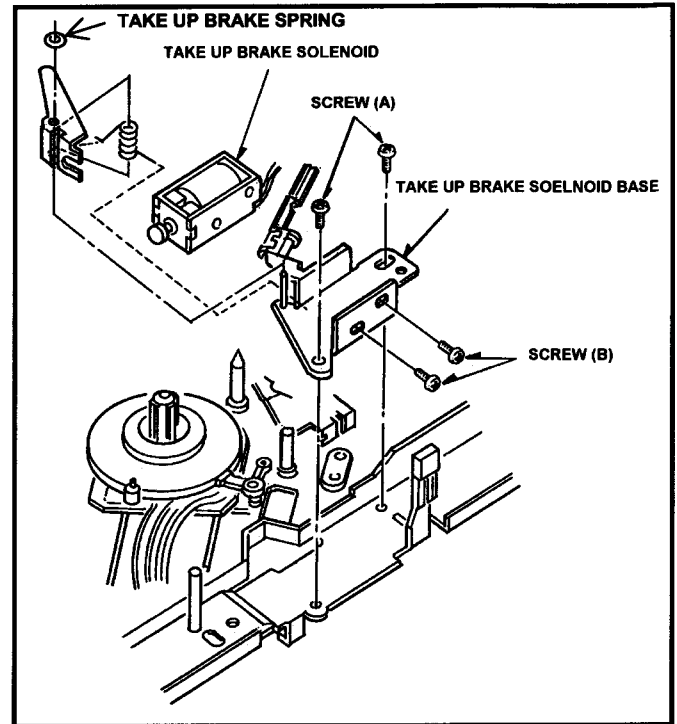


Brake Solenoid Position Adjustment

2-10 Take-up Brake Solenoid Replacement and Adjustment

(Removal of Take-up Brake Solenoid)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Remove the connector P18 on the Mech. Interconnection board.
5. Remove 2 screws (A) and remove the take-up brake solenoid base unit.
6. Remove 2 screws (B) and remove the Brake Solenoid from the Take-up Brake Solenoid Base Unit.



Take up Brake Solenoid Removal

(Installation)

1. Install a new Take up Brake Solenoid as reverse order of its removal.
Note: Install a take up brake spring as shown in the figure.
2. After installation adjust the gap between brake pad and turn table. (Refer to Supply Brake Solenoid Replacement and Adjustment.)

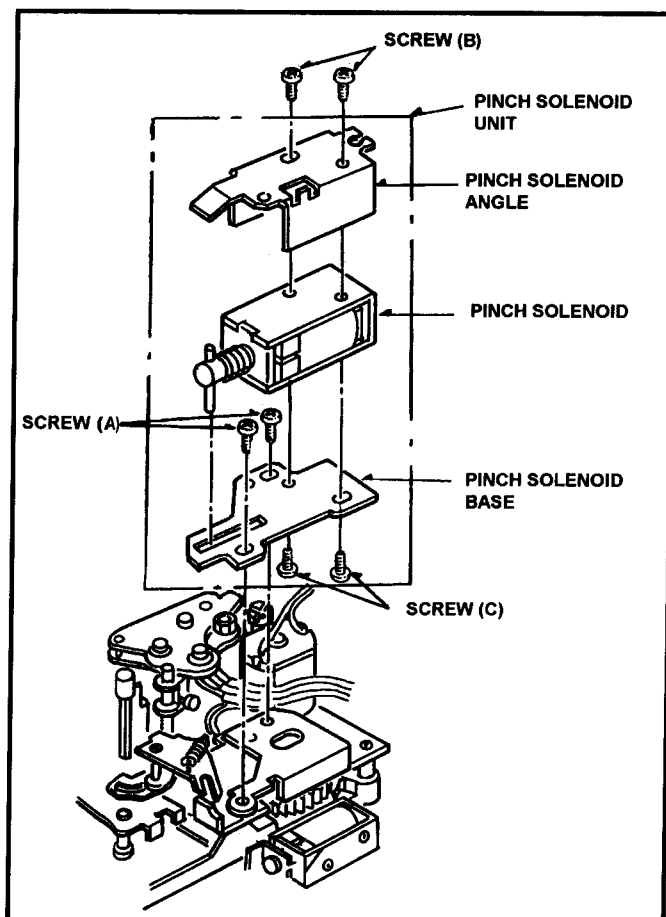
2-11. Pinch Solenoid Replacement

(Removal of Pinch Solenoid)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Remove 2 screws (A) and remove the Pinch Solenoid Unit.
5. Remove 2 screws (B) and remove the Pinch Solenoid Angle.
6. Remove 2 screws (C) and remove pinch solenoid base then remove Pinch Solenoid.

(Installation of Pinch Solenoid)

1. Install a new Pinch Solenoid as reverse order of its removal. After installation Pinch Solenoid Position Adjustment is necessary. (Refer to Pinch Solenoid Position Adjustment.)



Pinch Solenoid Removal

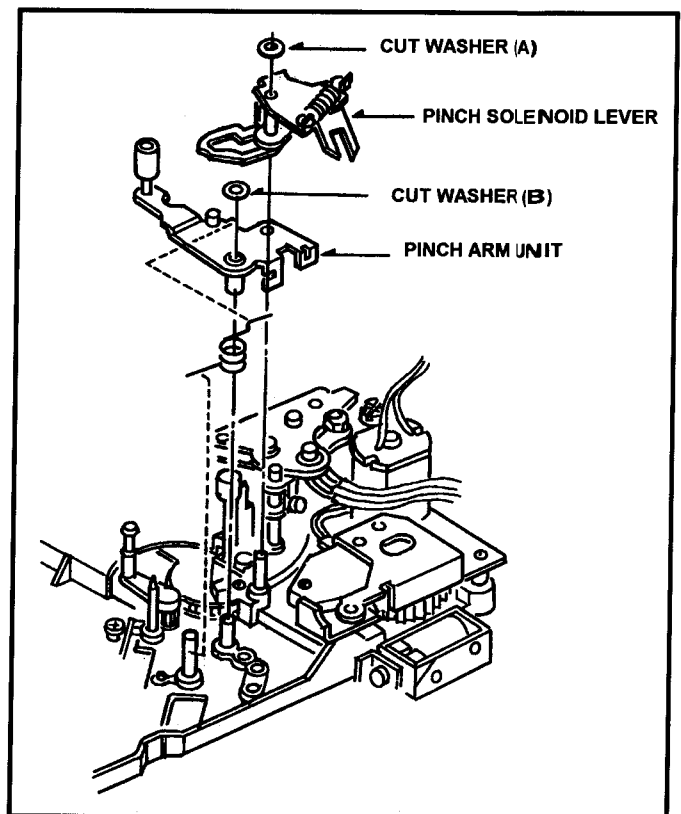
2-12. Pinch Arm Unit Replacement

(Removal of Pinch Arm Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Disconnect the connector P20 on the Mech. Interconnection board.
5. Remove the Pinch Solenoid Unit.
6. Remove 2 Screws (A) and remove the Pinch Solenoid Unit.
7. Remove the cut washer (B) and remove the Pinch Solenoid Lever.
8. Remove the cut washer (C) and remove the Pinch Arm Unit.

(Installation of Pinch Arm Unit)

1. Install a new Pinch Solenoid as reverse order of its removal. After installation adjust Pinch Solenoid Position Adjustment. (Refer to Pinch Solenoid Position Adjustment.)



Pinch Arm Unit Replacement

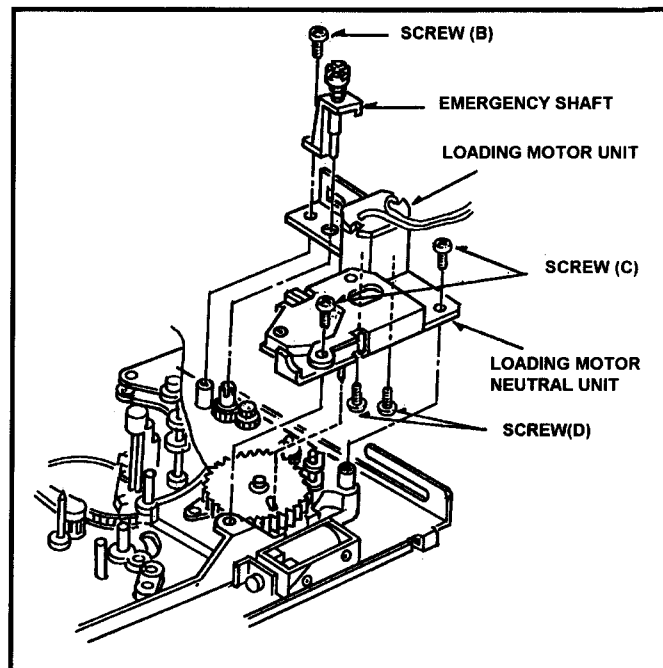
2-13 Loading Motor Replacement

(Removal of Loading Motor)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Disconnect the connector P21 on the Mech. I/F board. Which is shown in the Supply an Take-up Reel Unit Replacement.
5. Remove the Pinch Solenoid Unit. (Refer to Pinch Solenoid Replacement.)
6. Remove the screw (B) and remove the Emergency Shaft.
7. Remove 2 screws (C) and remove the Loading Motor Neutral Unit.
8. Remove 2 screws (D) and remove the Loading Motor.

(Installation of Loading Motor)

1. Install a new Loading Motor with 2 screws (D) to the Loading Motor Neutral Unit.
2. Install the Loading Motor unit with 2 screws (C). For this installation, be careful that the pin of Mode SW unit should be matched to groove position of main Cam Gear.
3. Install the emergency shaft with screw (B).
4. Install the Pinch Solenoid Unit. After installation adjust Pinch Solenoid Position Adjustment. (Refer to Pinch Solenoid Position Adjustment.)
5. Connect the connector P21.



Removal of Loading Motor

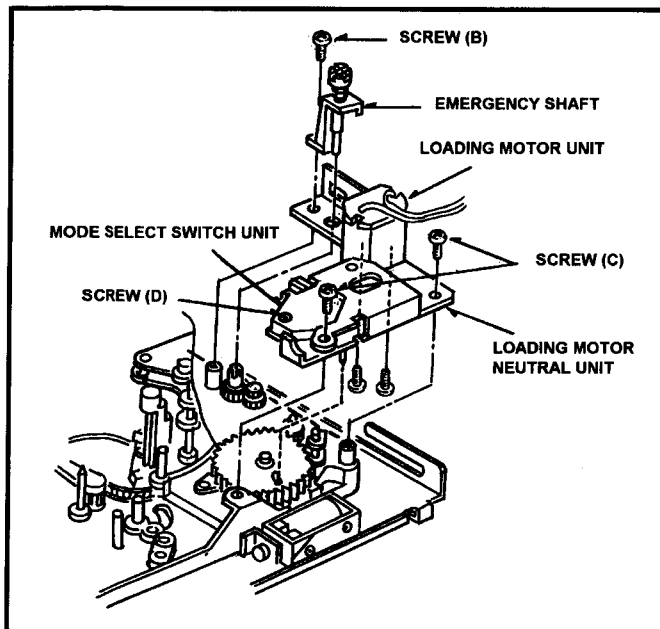
2-14. Mode Switch Unit Replacement

(Removal of Mode Switch Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel.
4. Disconnect P22 on the Mech. Interconnection board.
5. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit. (Refer to Loading Motor Replacement.)
6. Remove 2 screws (D) and remove the Mode Switch Unit from the Loading Motor Neutral Unit.

(Installation of Mode Switch Unit)

1. Install a new Mode Switch Unit in reverse order of its removal.
Note: Set the pin of the Mode Switch to the groove of the Main Cam Gear.
2. After Pinch Solenoid Unit, adjust Pinch Solenoid Position Adjustment. (Refer to Pinch Solenoid Position Adjustment.)



Removal of Mode Switch Unit

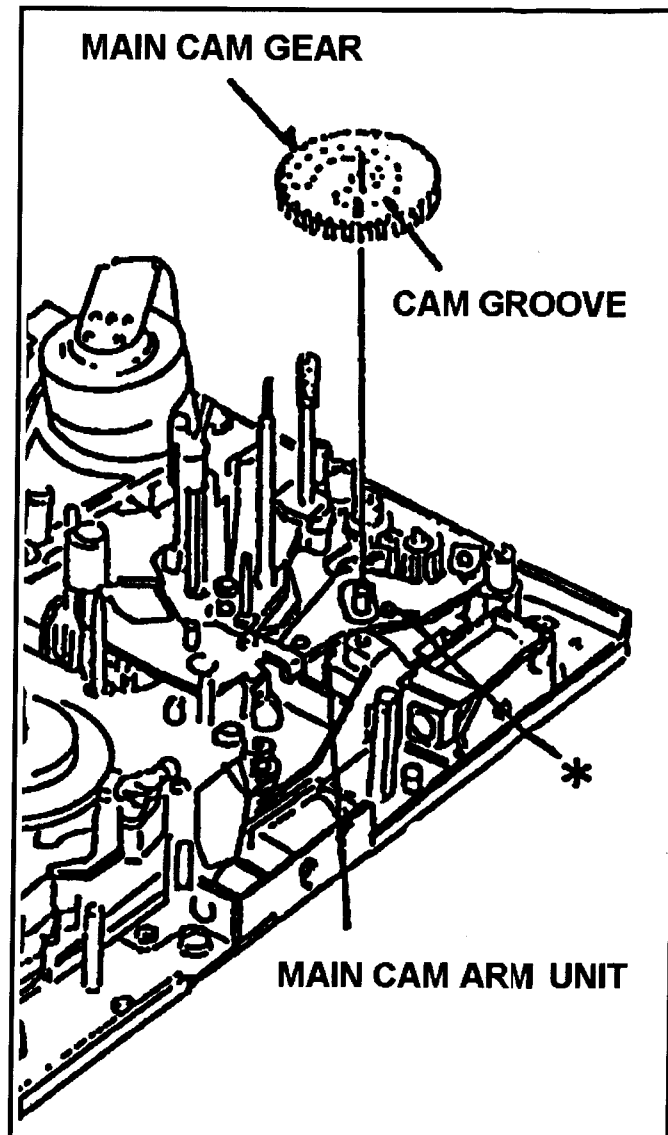
2-15. Main Cam Gear Replacement

(Removal of Main Cam Gear)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit. (Refer to Loading Motor Replacement and Pinch Arm Unit Replacement.)
4. Remove the Main Cam Gear.

(Installation of Main Cam Gear)

1. Install a new Main Cam Gear in reverse order of its removal. For this installation, set the pin of the Income Arm Unit to the groove of the Main Cam Gear.



Removal of Main Cam Gear

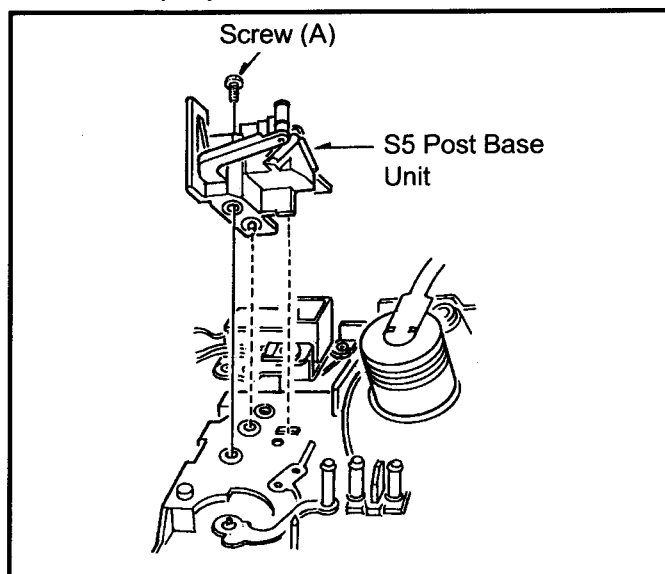
2-16. S5 Post Base Unit Replacement

(Removal of S5 Post Base Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the screw (A) and remove the S5 Post Base Unit.

(Installation of S5 Base Unit)

1. Install the new S5 Post Base Unit as reverse order of its removal.
(Note) Install the S5 Post by the position fix as shown in the figure.
2. After installation, Post Pre-adjustment and Linearity adjustment are necessary.



Removal of S5 Post Base Unit

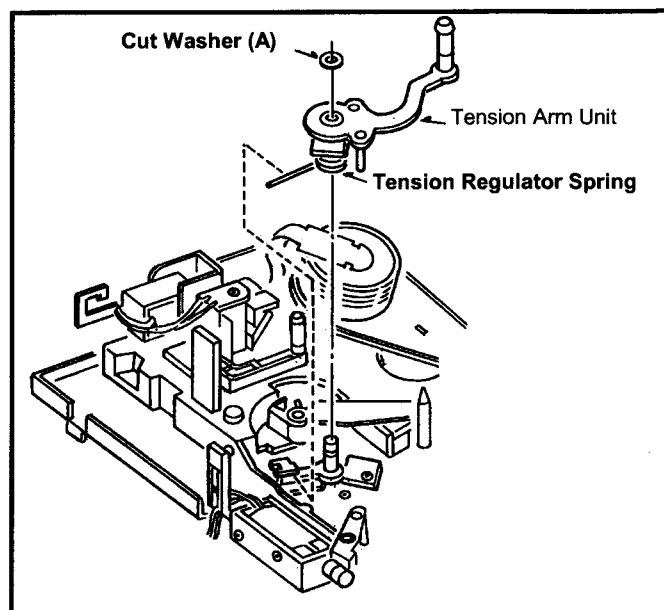
2-17. Replacement of Tension Arm Unit

(Removal of Tension Arm Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the cut washer (A) and remove the tension regulator spring from its hook then remove the tension arm unit.

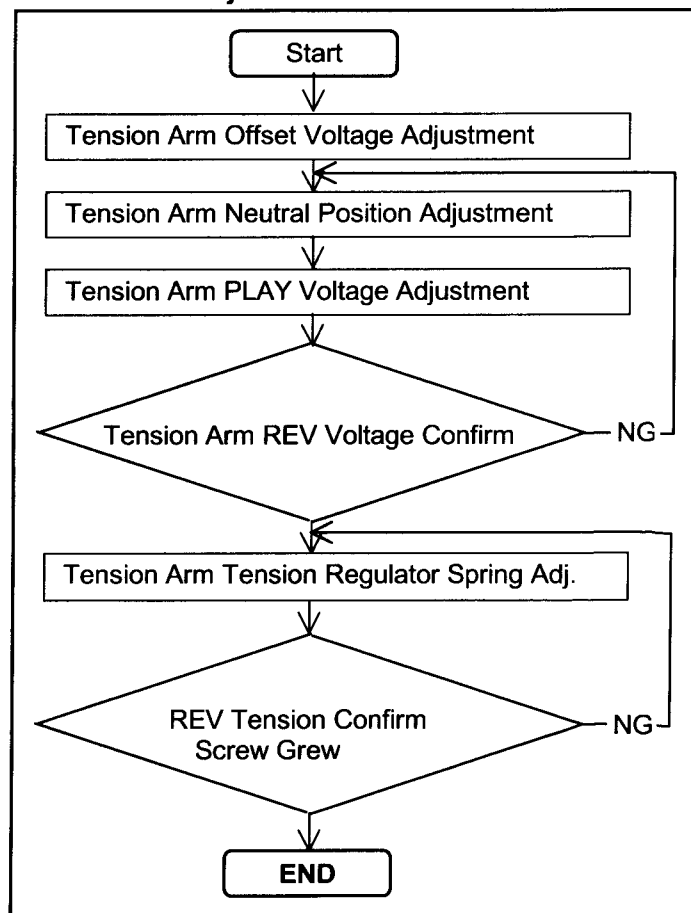
(Installation of Tension Arm Unit)

1. Install the new Tension Arm Unit as reverse order of its removal.
2. After installation adjust tension arm adjustment following the tension arm adjustment flow chart.



Removal of Tension Arm Unit

Tension Arm Adjustment Flow Chart



2-18. S1 Post Loading Arm Unit Replacement and Adjustment

(Removal of S1 Post Loading Arm Unit)

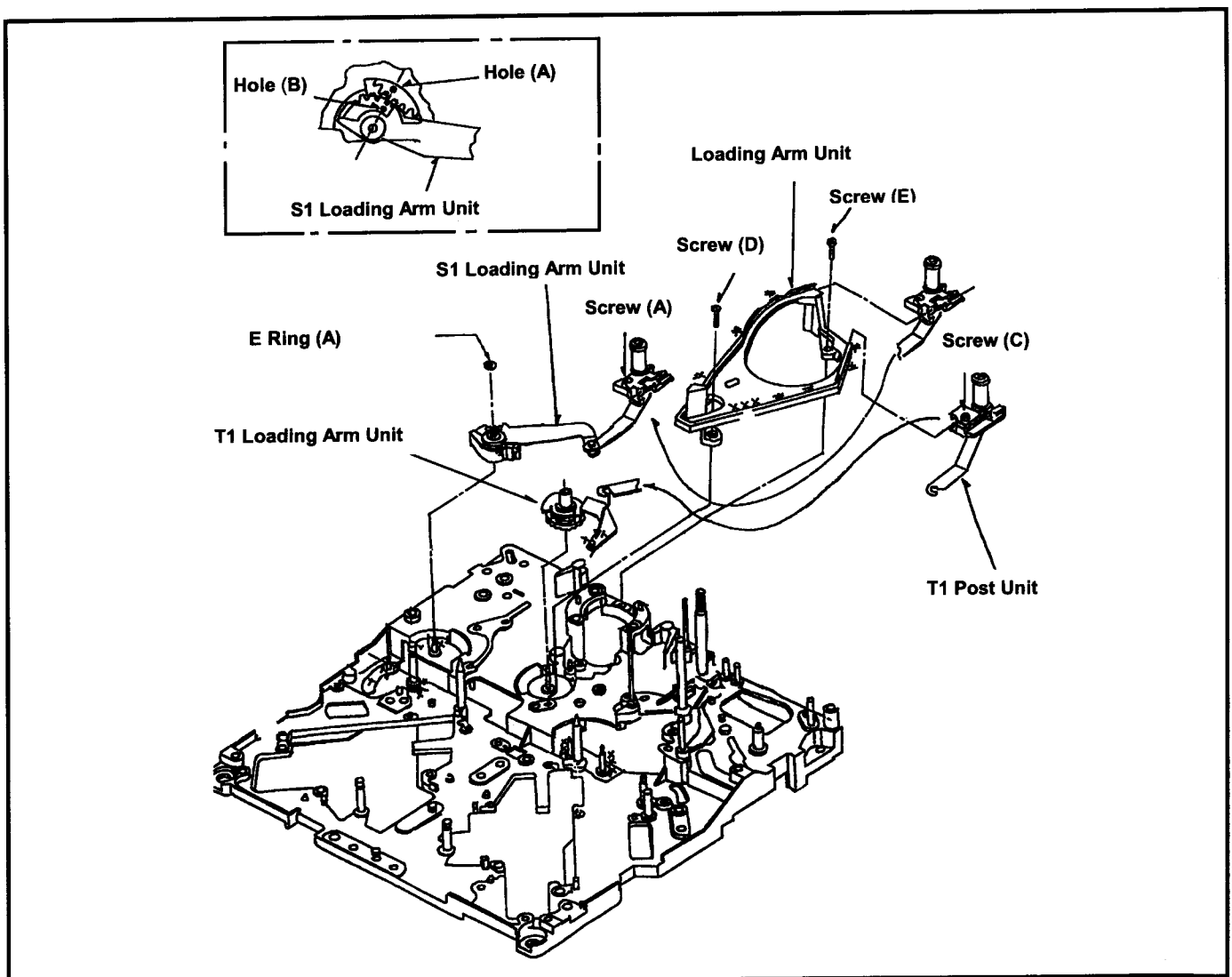
1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the S5 Post Base Unit. (Refer to S5 Post Base Unit Replacement.)
4. Remove the tension arm unit. (Refer to Tension Arm Unit Replacement.)
5. Remove the screw (A) and remove the S1 Post from the loading rail.
6. Remove the E ring (A) and remove the S1 Loading Arm Unit.

(Installation of S1 Post Loading Arm Unit)

1. Install a new S1 Post Loading Arm Unit as reverse order of removal. After its installation S1 Post Loading Arm Unit Phase Adjustment is necessary.
2. After its installation confirm the S1 Post moves smoothly on the loading rail. Then Adjust the Tension Arm and Linearity.

(Adjustment Procedure)

1. When S1 Post Loading Arm is installed, the hole (A) and (B) must be parallel.



S1 Post Loading Arm Unit Removal

2-19. T1 Boat Unit Replacement

(Removal of T1 Boat Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the screw (C) and remove the T1 Post from the Loading Rail.
4. Remove the T1 Boat Unit from the T1 Loading Arm Unit.

(Installation of T1 Boat Unit)

1. Install a new T1 Boat Unit as reverse order of its removal.
2. After its installation, confirm the T1 Post moves on the Loading Rail. Then Linearity Adjustment is necessary.

2-20. T1 Loading Arm Unit Replacement and Adjustment

(Removal of T1 Loading Arm Unit)

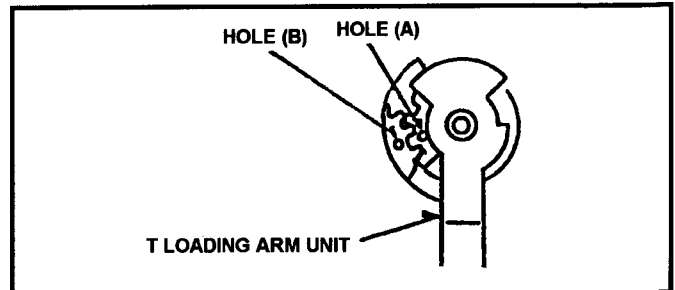
1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the cylinder unit. (Refer to the cylinder unit replacement.)
4. Rotate the emergency eject shaft CW to load the T1 Post and make a space to remove the screw (D) as shown in Fig. 6-15-1.
5. Remove the screw (A) and (C) then remove the S1 and T1 Posts from the Loading Rail.
6. Remove the screw (D) and (E) and remove the Loading Rail.
7. Remove the T1 Boat Unit from the T1 Loading Unit.

(Installation of T1 Loading Arm Unit)

1. Install a new T1 Loading Arm Unit as reverse order of its removal. For this installation the following adjustment is necessary.

(Adjustment Procedures)

1. Install T1 Loading Arm Unit so that the Hole (A) and Hole (B) are in parallel.
2. After installation, confirm that the T1 post moves smoothly on the Loading Rail. Then Linearity Adjustment is necessary.



T1 Loading Arm Unit Position Adjustment

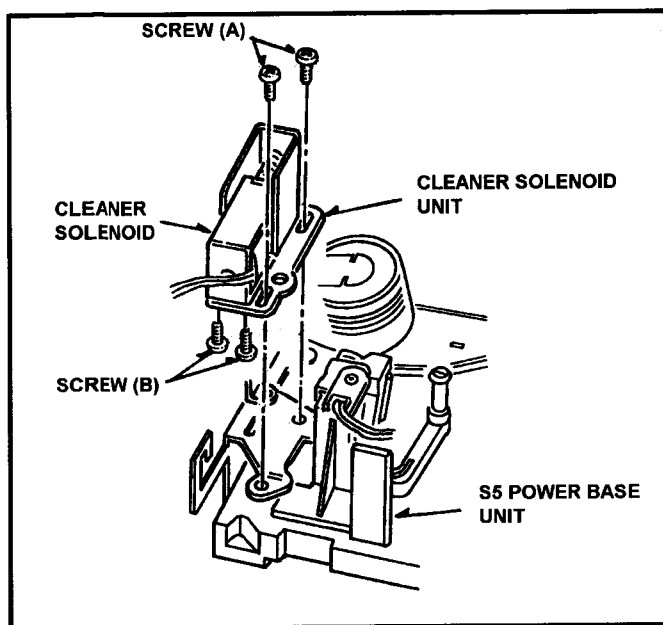
2-21. Cleaner Solenoid Replacement and Adjustment

(Removal of Cleaner Solenoid)

1. Remove the top panel.
2. Remove the Front Loading Unit.
3. Remove the connector P11 on the Mechanical Interconnection Board.
4. Remove two screws (A) and remove the Cleaner Solenoid Unit.
5. Remove two screws (B) and remove the Cleaner Solenoid.

(Installation of Cleaner Solenoid)

1. Install a new Cleaner Solenoid as reverse order of its installation.
2. After its installation adjust Cleaner Solenoid Position.



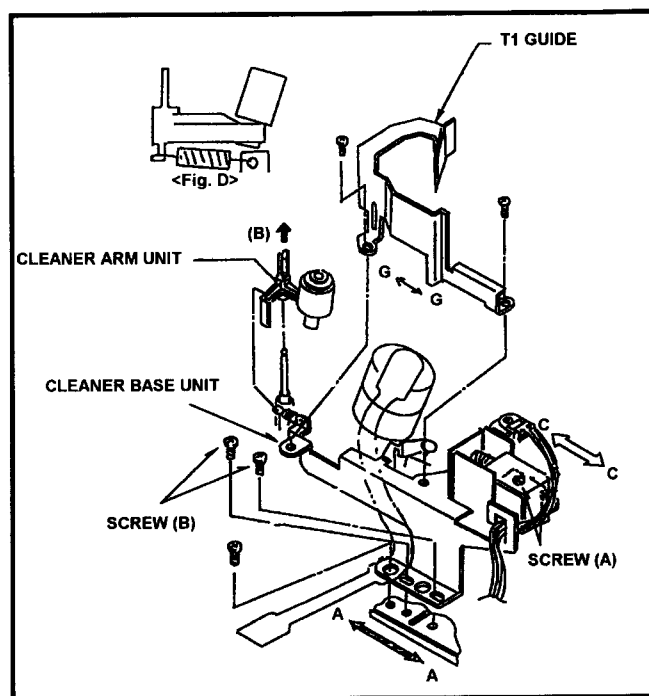
Cleaner Solenoid Replacement

2-22. Cleaner Solenoid Position Adjustment

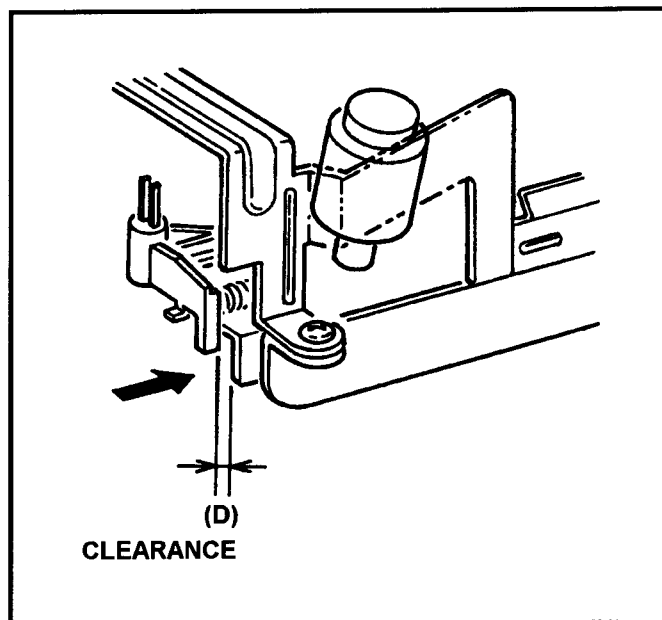
Tool

Eccentric Driver (VFK0357)

1. Push the Cleaner Solenoid Shaft and confirm the clearance between Cleaning Arm Unit and Cleaner Base Plate (D) is 0.5 mm to 0.7 mm.
2. If it is out of specification, loosen 2 screws (A) and move the cleaner solenoid arrow C direction and adjust the clearance (D) is in the specification.
3. Push the cleaner solenoid shaft and confirm that the cleaner roller touches the cylinder. Then confirm that the cleaner roller returns original position when the shaft is released.
4. Push the Solenoid shaft and rotate the cylinder and confirm that the cleaner roller is rotated by the cylinder movement.



Cleaner Solenoid Position Adjustment



Cleaner Solenoid Position Adjustment

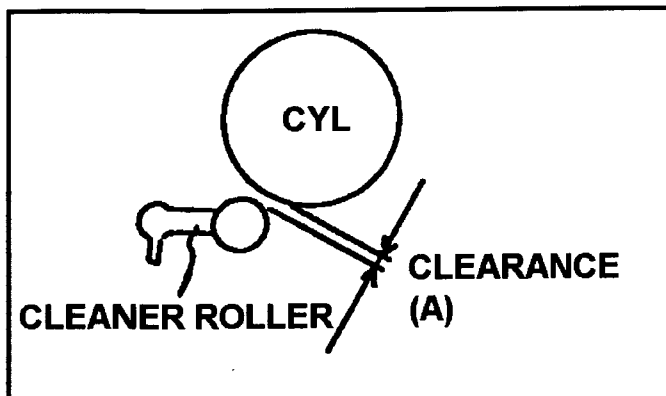
Note: If the Cleaner Base Plate is moved, Cleaner Roller Position Adjustment is necessary.

2-23. Cleaner Roller Position Adjustment

Tool

Eccentric Driver (VFK0357)

1. Confirm that the clearance (A) between cylinder unit and cleaner roller is 1.0 mm to 1.2 mm.
2. If it is out of specification loosen screw (B) and move the cleaner base unit and adjust its position by the eccentric driver.



Cleaner Roller Position Adjustment

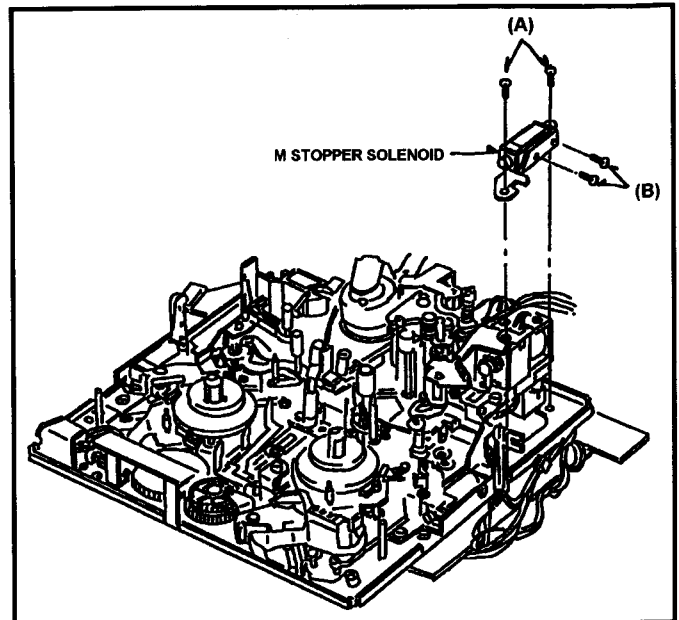
2-24. M Stopper Solenoid Replacement and Adjustment

(Removal of M Stopper Solenoid)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the connector P24 on the Mech. Interconnection board.
4. Remove 4 screws (A) and (B) and remove the M Stopper Solenoid.

(Installation of M Stopper Solenoid)

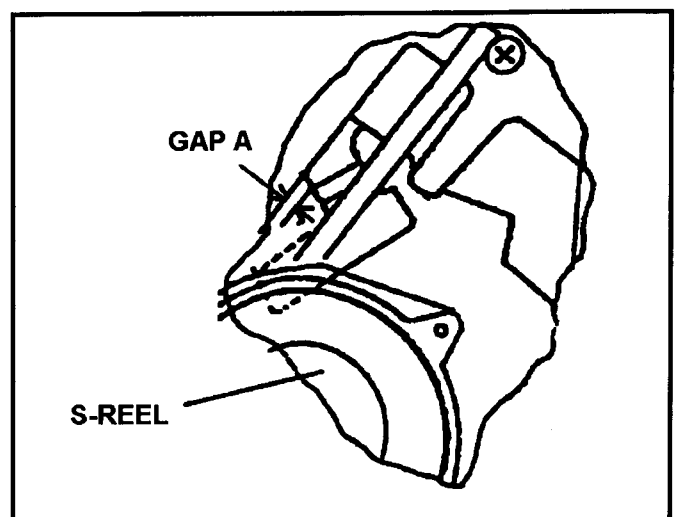
1. Install a new M Stopper Solenoid as reverse order of its removal.
2. After its installation following adjustment is necessary.



M Stopper Solenoid Removal

(Adjustment Procedures)

1. Set the Reel Table at L cassette position.
2. Release the M Stopper by pushing the M Stopper Solenoid Shaft.
3. Loosen the screw (A) and adjust the M Stopper Solenoid Unit Position so that the Gap (A) between Mech. Chassis and M Stopper is 1.1 mm to 1.3 mm.



M Stopper Solenoid Position Adjustment

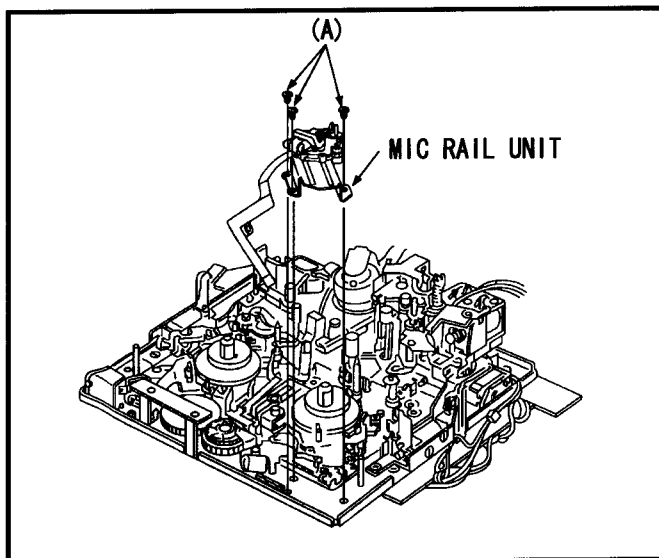
2-25. MIC Rail Unit Replacement

(Removal of MIC Rail Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the bottom panel. (Refer to the bottom panel removal.)
4. Remove the connector P17 on the Mech. Interconnection board.
5. Remove the MIC Drive REV Spring.
6. Remove 3 screws and remove the MIC Rail Unit.

(Installation of MIC Rail Unit)

1. Install a new MIC Rail Unit as reverse order of its installation.
2. Confirm that M and L cassette touches MIC Rail Unit.



MIC Rail Unit Removal

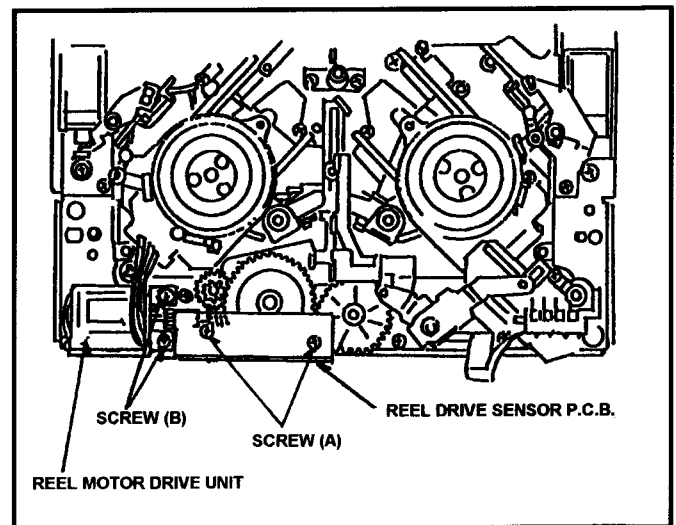
2-26. Reel Drive Motor Unit Replacement

(Removal of Reel Drive Motor Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the connector P16 on the Mech. Interconnection board.
4. Remove 2 screws (A) and remove the Reel drive sensor board.
5. Remove 2 screws (B) and remove the Reel Drive Motor Unit.

(Installation of Reel Drive Motor Unit)

1. Install a new Reel Drive Motor Unit as reverse order of its removal.



Reel Drive Motor Unit Removal

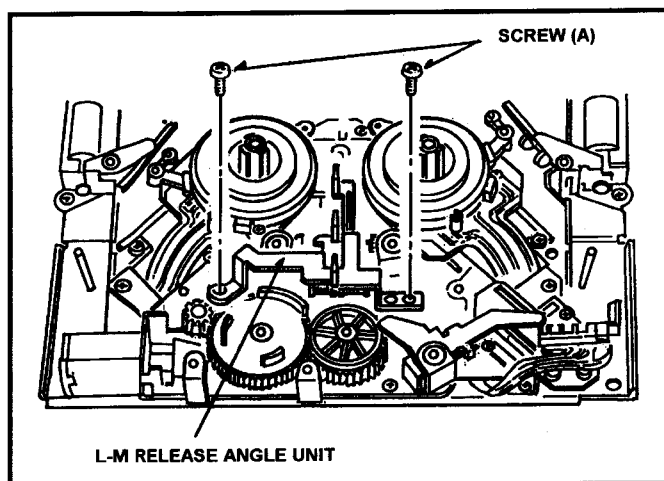
2-27. L-M Brake Release U. Replacement

(Installation of L-M Brake Release Unit)

1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the screw (A) and remove the L-M Brake Release Unit.

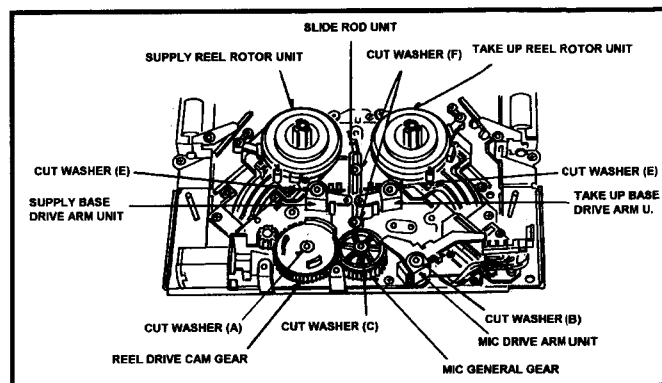
(Installation of L-M Brake Release Unit)

1. Install a new L-M Brake Release Unit as reverse order of its removal.

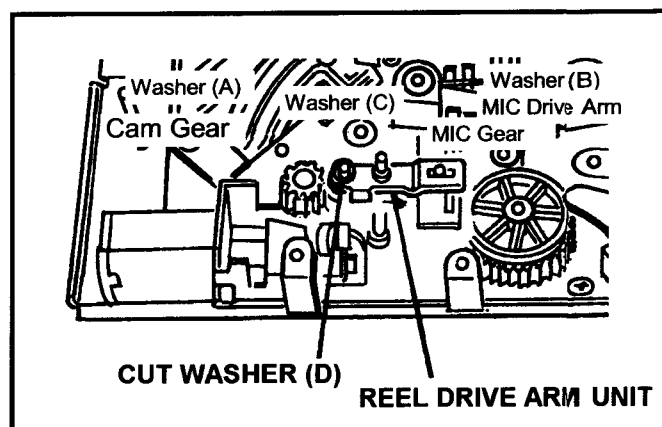


L-M Brake Release Unit Removal

10. Remove the cut washer (E) and remove the supply and take-up side base drive arm unit.
11. Remove the cut washer (F) and remove the slide load.



Slide Rod Unit Removal



Reel Drive Arm Unit Removal

2-28. Slide Rod Unit Replacement and Adjustment

(Removal of Slide Rod Unit)

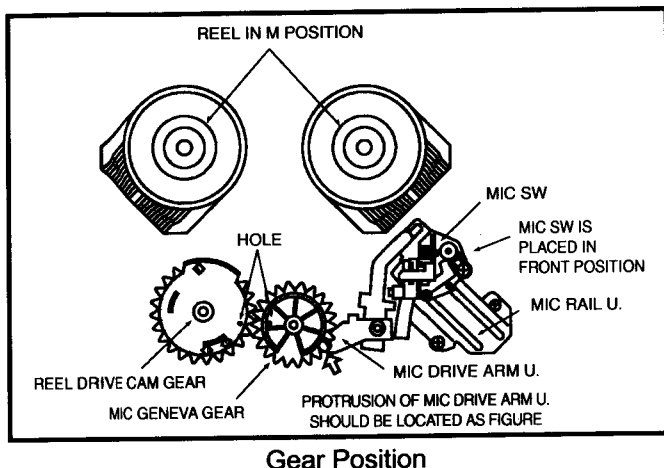
1. Remove the top panel.
2. Remove the front loading unit.
3. Remove the L-M Brake Release Unit. (Refer to L-M Brake Release Unit Replacement.)
4. Remove the Reel Drive Sensor board. (Refer to Reel Drive Motor Unit Replacement.)
5. Remove the cut washer (A) and remove the Reel Drive Cam Gear.
6. Remove the cut washer (B) and remove the MIC Drive Arm Unit.
7. Remove the cut washer (C) and remove the MIC intermittent gear.
8. Remove the cut washer (D) and remove the Reel Drive Arm Unit.
9. Remove the supply and take-up reel rotor unit. (Refer to Supply and Take-up Reel Table Unit Replacement.)

(Installation of Slide Rod Unit)

1. Install a new Slide Rod Unit as reverse order of its removal.
2. When Reel Drive Cam Gear and MIC Intermittent Gear are installed phase adjustment is necessary.

(Adjustment Procedures)

1. Install a MIC Intermittent Gear.
2. Set the Reel Rotor Unit at M Cassette Position by hand.
3. Install a MIC Drive Arm Unit.
4. Rotate the MIC intermittent Gear by hand so that the Distinction SW is as close as possible.



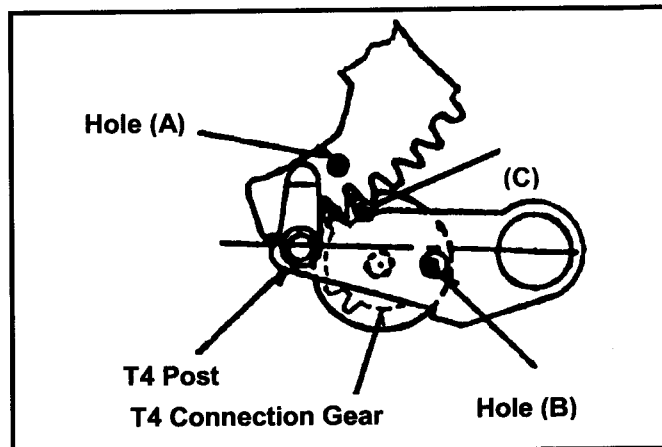
5. Install a Reel Drive Cam Gear so that its hole is at MIC intermittent gear hole.
6. Install 3 cut washers (A), (B) and (C).

Adjustment Note:

- 1) Close the Reel Table to M Cassette position.
- 2) Set the MIC SW (Distinction SW) to the nearest position from the Reel.
- 3) MIC Drive Arm Unit Pin position is as shown in the above figure.
- 4) Reel Drive Came Gear Hole and MIC Intermittent Gear phase are matched.

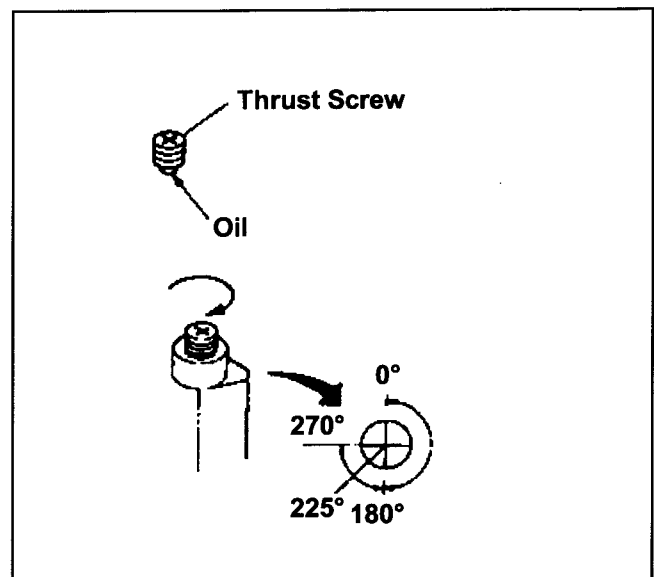
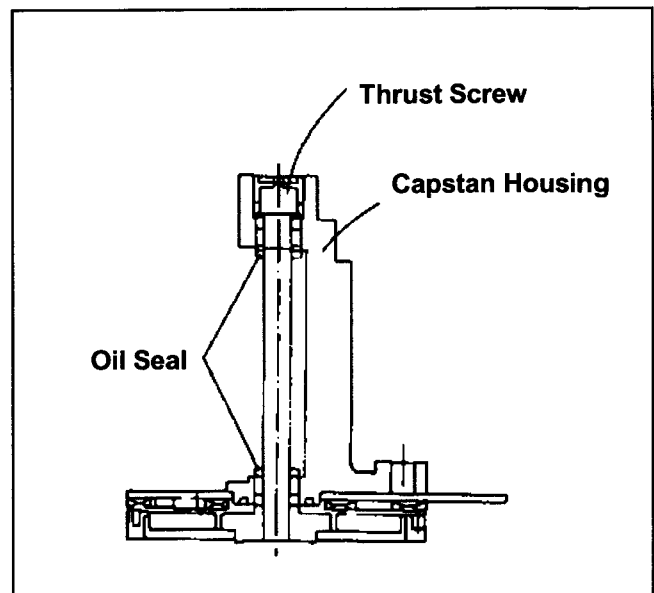
2-29. T4 Post Position Adjustment

1. Set the VTR unloading condition.
2. Confirm the T4 post hole is at the T4 connection gear (B).
3. Confirm that © and hole (A) position is as shown in the figure.
4. If the T4 post position is incorrect adjust following procedures.



2-30. Thrust Screw Replacement and Adjustment

1. Remove the Thrust Screw.
2. Supply oil (VFK0906) as shown in the figure and set the capstan housing.
3. While rotating the capstan shaft CCW tighten the thrust screw CW slowly and stop it when the rotation becomes smoothly.
4. Rotate another 180 degrees or 270 degrees from the stop position of item 3.
5. Grew the thrust screw.
6. Confirm the oil seal as shown in figure.



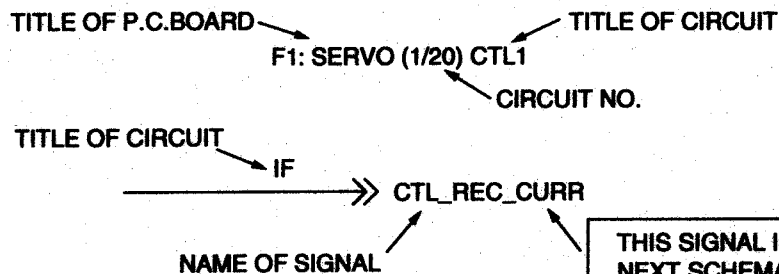
SECTION 4

SCHEMATIC DIAGRAMS

Note:

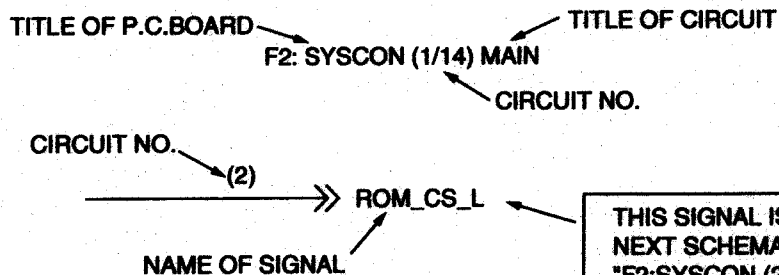
1. Do not use the part number shown on the schematic diagram or P.C.Board layout for ordering.
The correct part number for ordering is shown in the Exploded Views/Parts List section.
2. Unless otherwise specified, all resistors are in OHMS,
K=1,000 OHMS, all capacitors are in MICROFARADS (μ F), P= μ F.

(EX1)



THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC. PLEASE REFER TO "F1:SERVO (20/20) IF"

(EX2)



THIS SIGNAL IS CONNECTED TO NEXT SCHEMATIC. PLEASE REFER TO "F2:SYSCON (2/14) MAIN"

* mark ⇒ Parts value, see table in the schematic diagram.

(EX:)


	AJ-D940P	AJ-D940E	
R2018	10K	10K	← 10K Ω
R2019	20K	*PAT	← No part

NOTE:

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER SHOWN IN THE PARTS LIST.
AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

SCHEMATIC DIAGRAMS

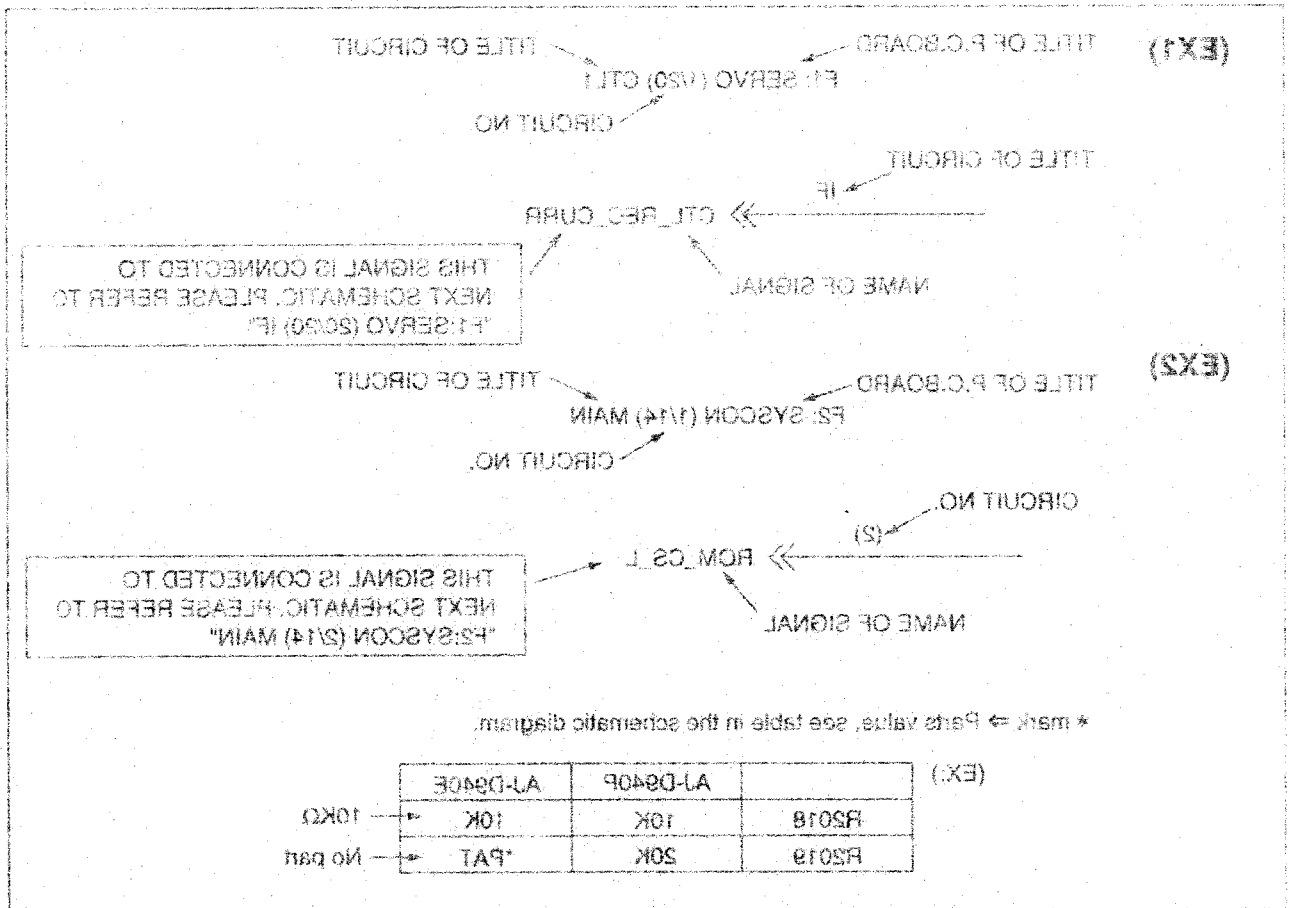
CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

1. The correct part number for ordering is shown in the exploded view parts list.
2. Unless otherwise specified, all resistors are in OHMS, all capacitors are in MICROFARADS (uF), P=1000 OHMS, K=1000 OHMS.



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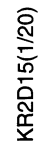
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F1: SERVO (2/20) CTL2	SCM02	F3: NON_TRK (15/31) NTRK_CTRL	SCM48
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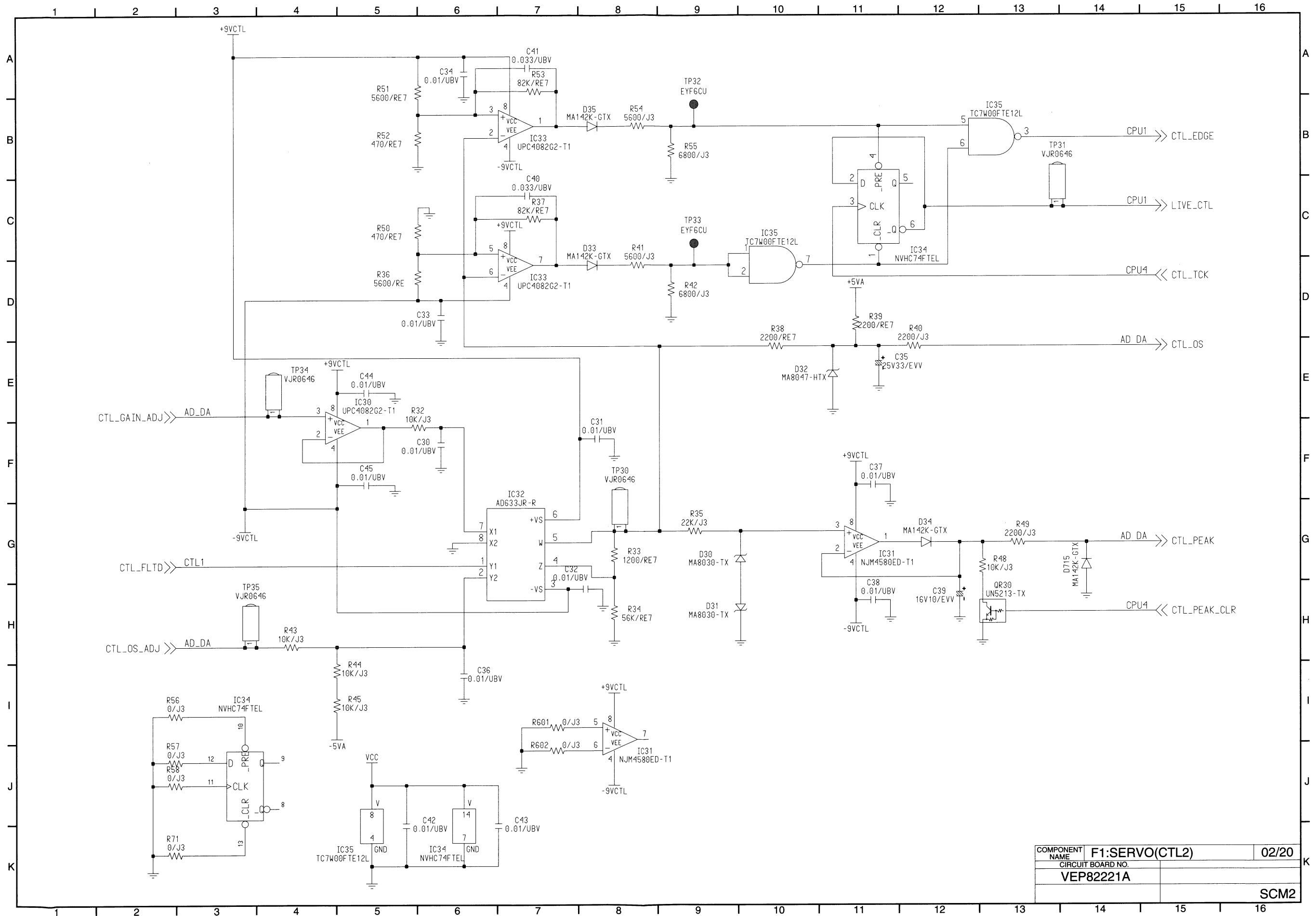
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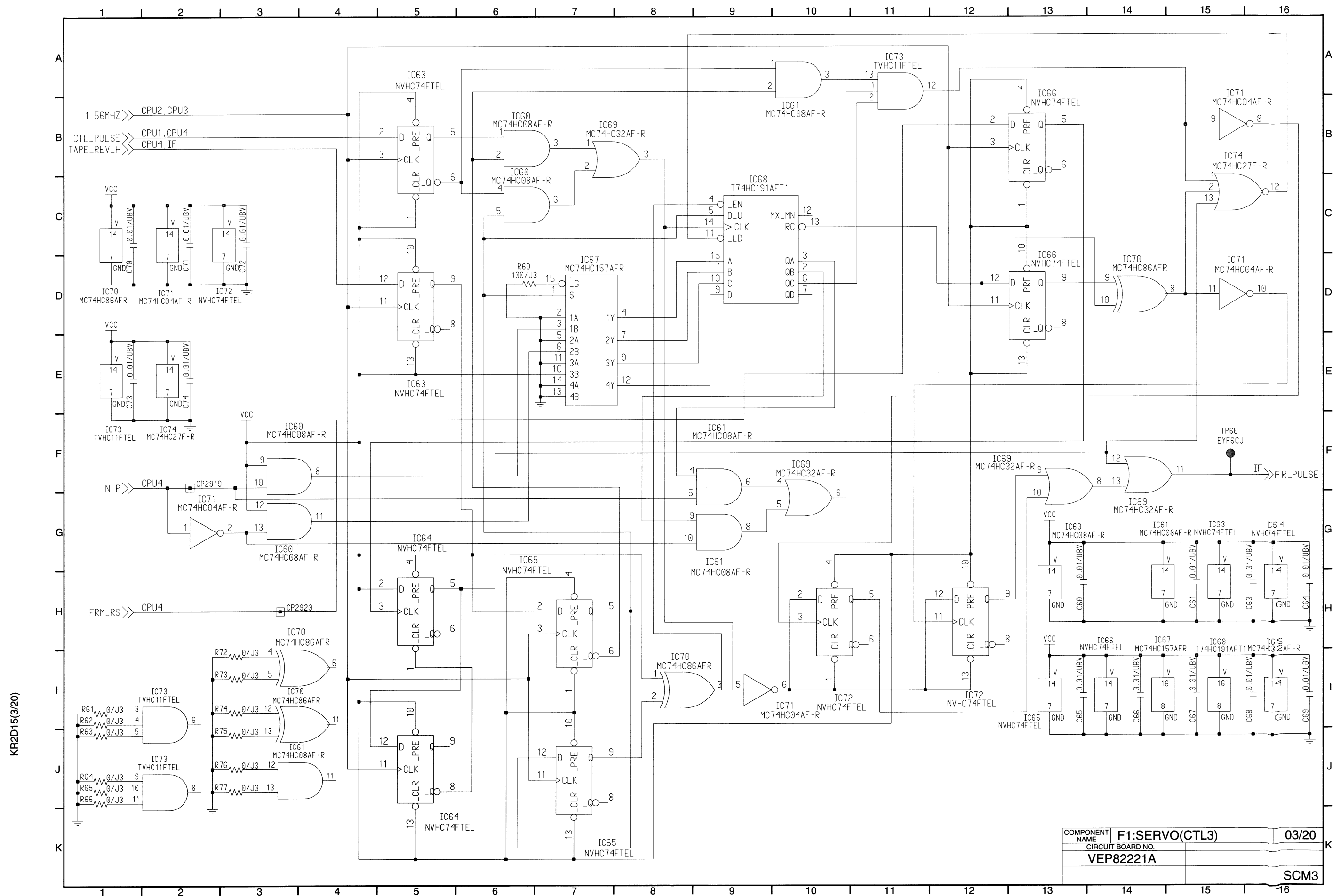
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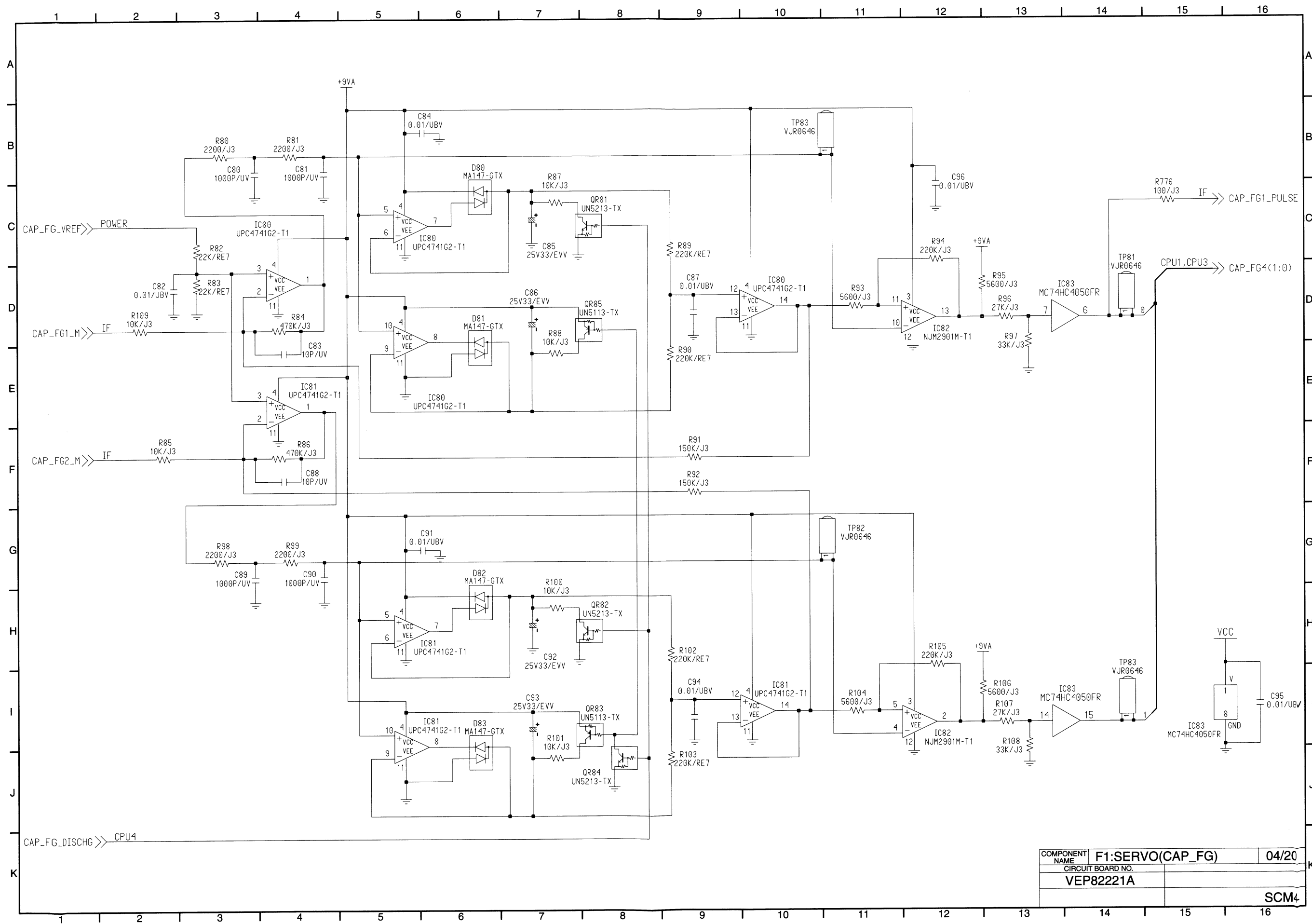
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HEAD_AMP (2/2)	SCM222
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MOTHER (2/13)	SCM224
MOTHER (3/13)	SCM225
MOTHER (4/13)	SCM226
MOTHER (5/13)	SCM227
MOTHER (6/13)	SCM228
MOTHER (7/13)	SCM229
MOTHER (8/13)	SCM230
MOTHER (9/13)	SCM231
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MOTHER (11/13)	SCM233
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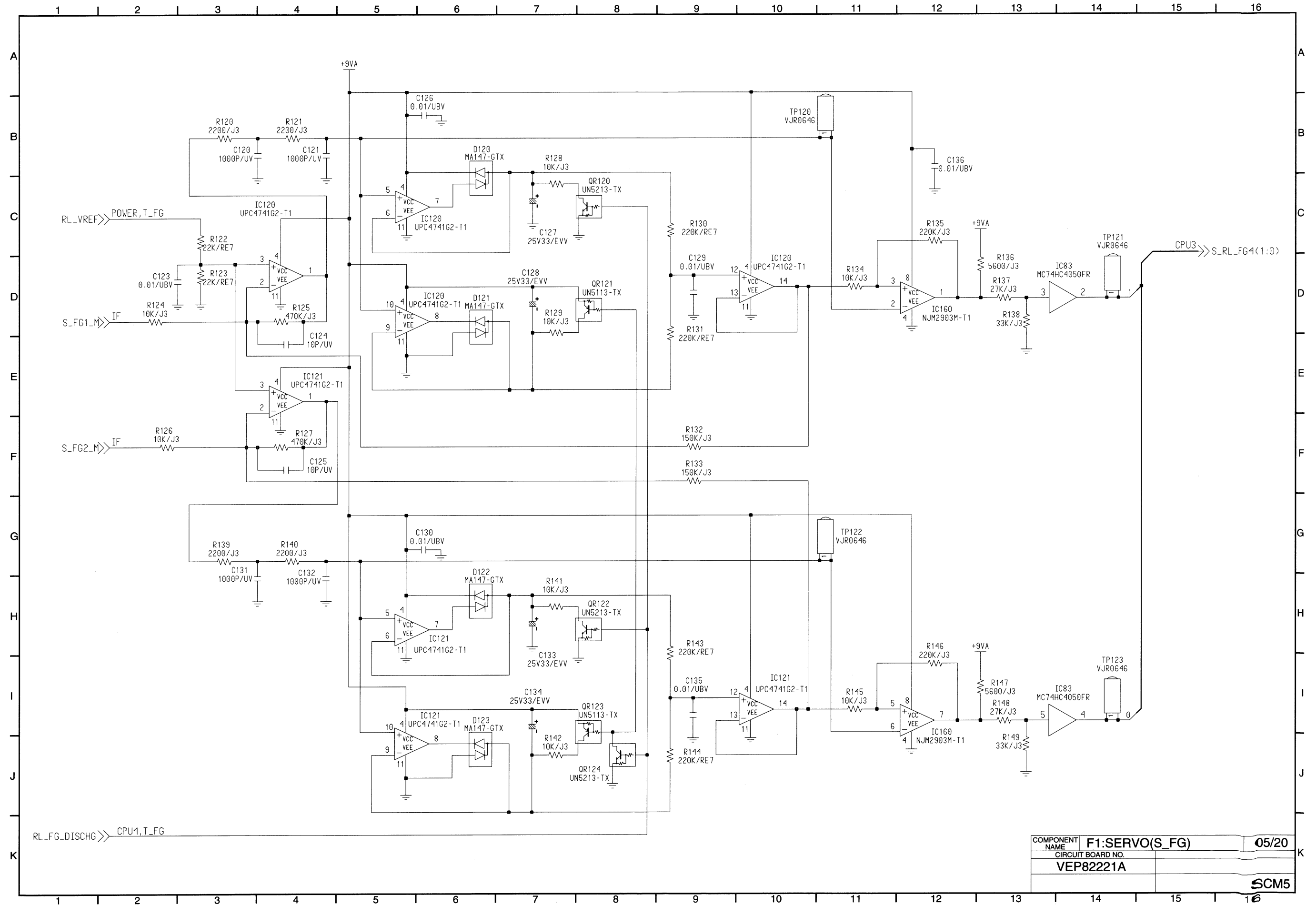




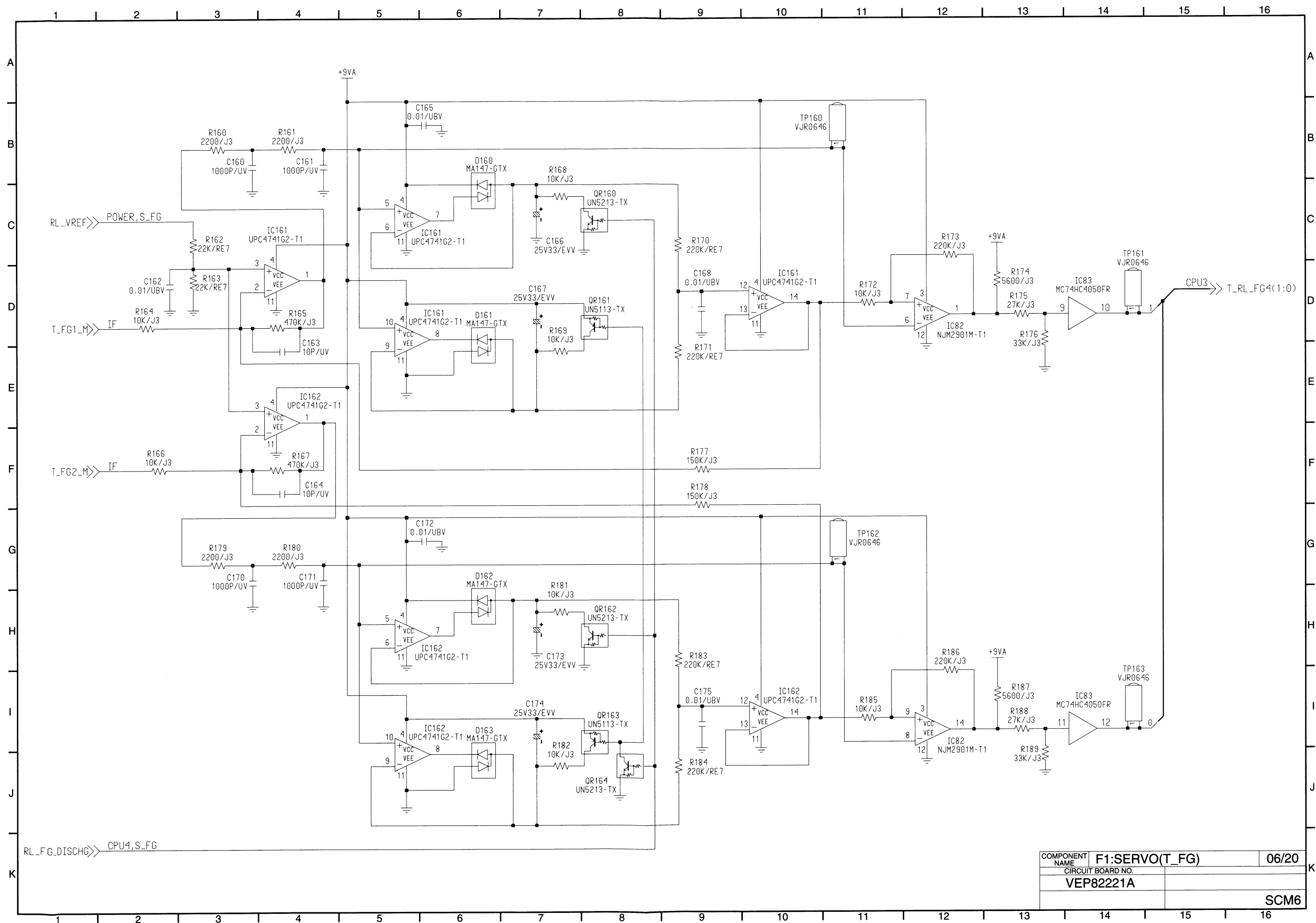


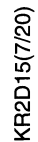
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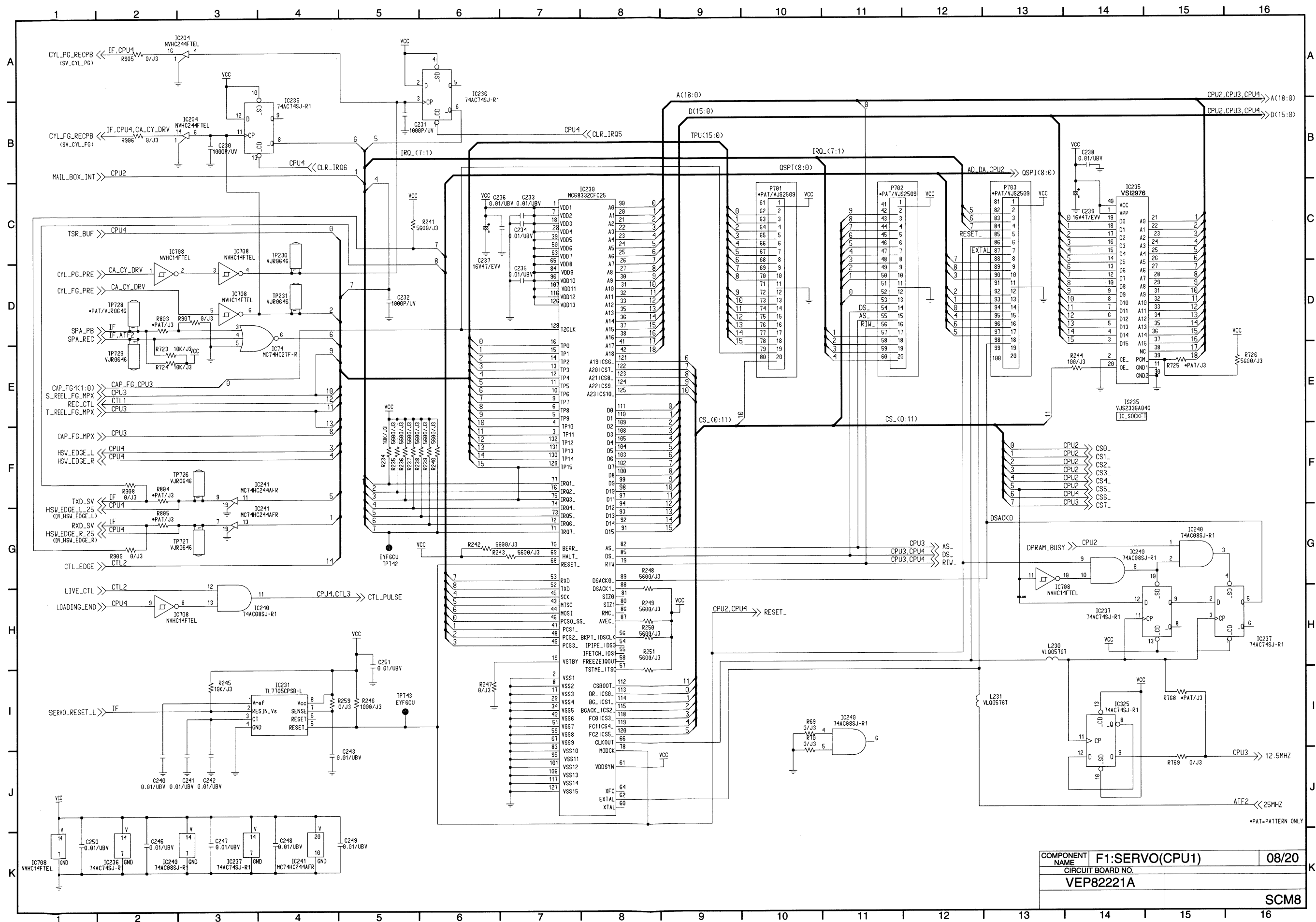
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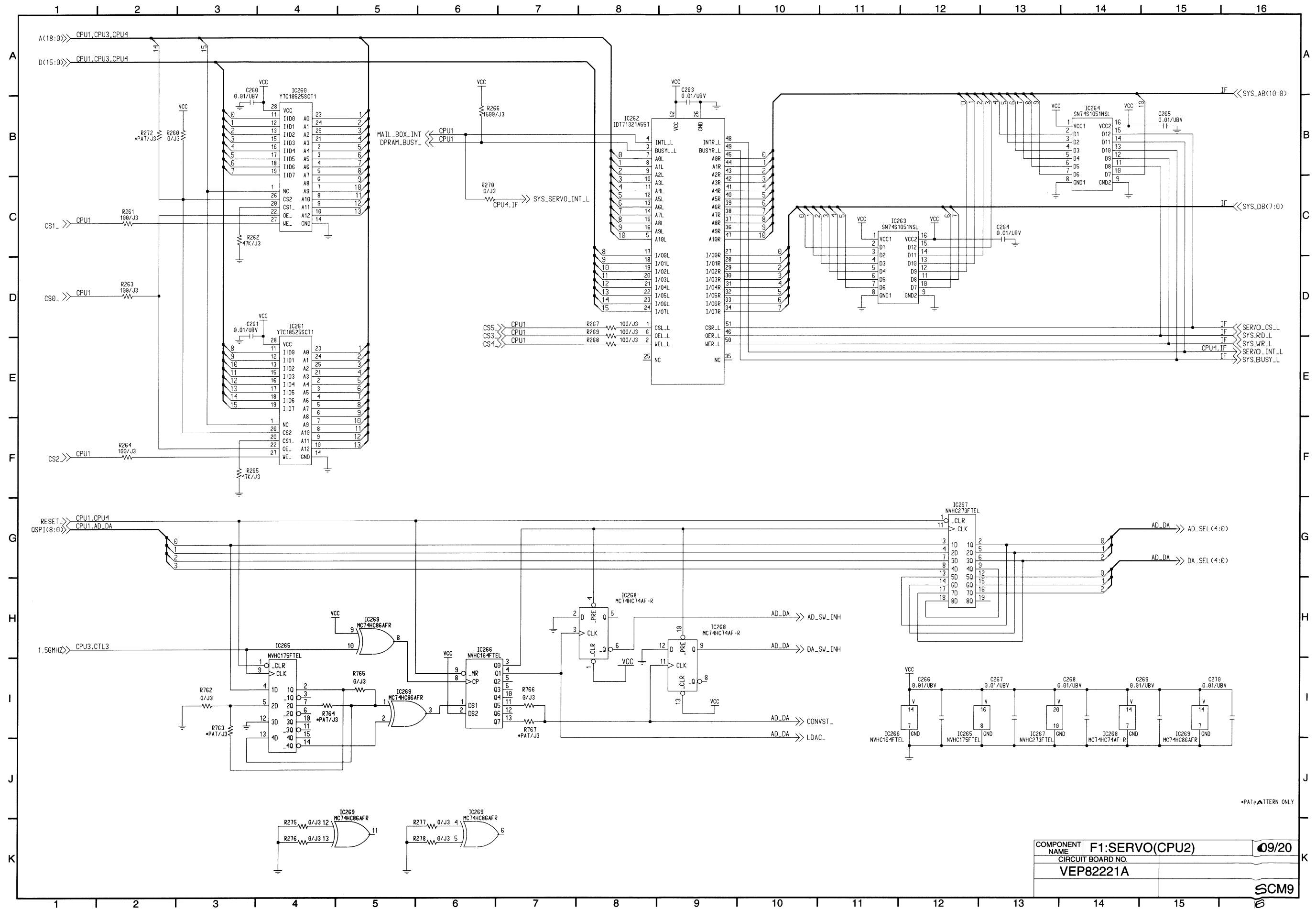
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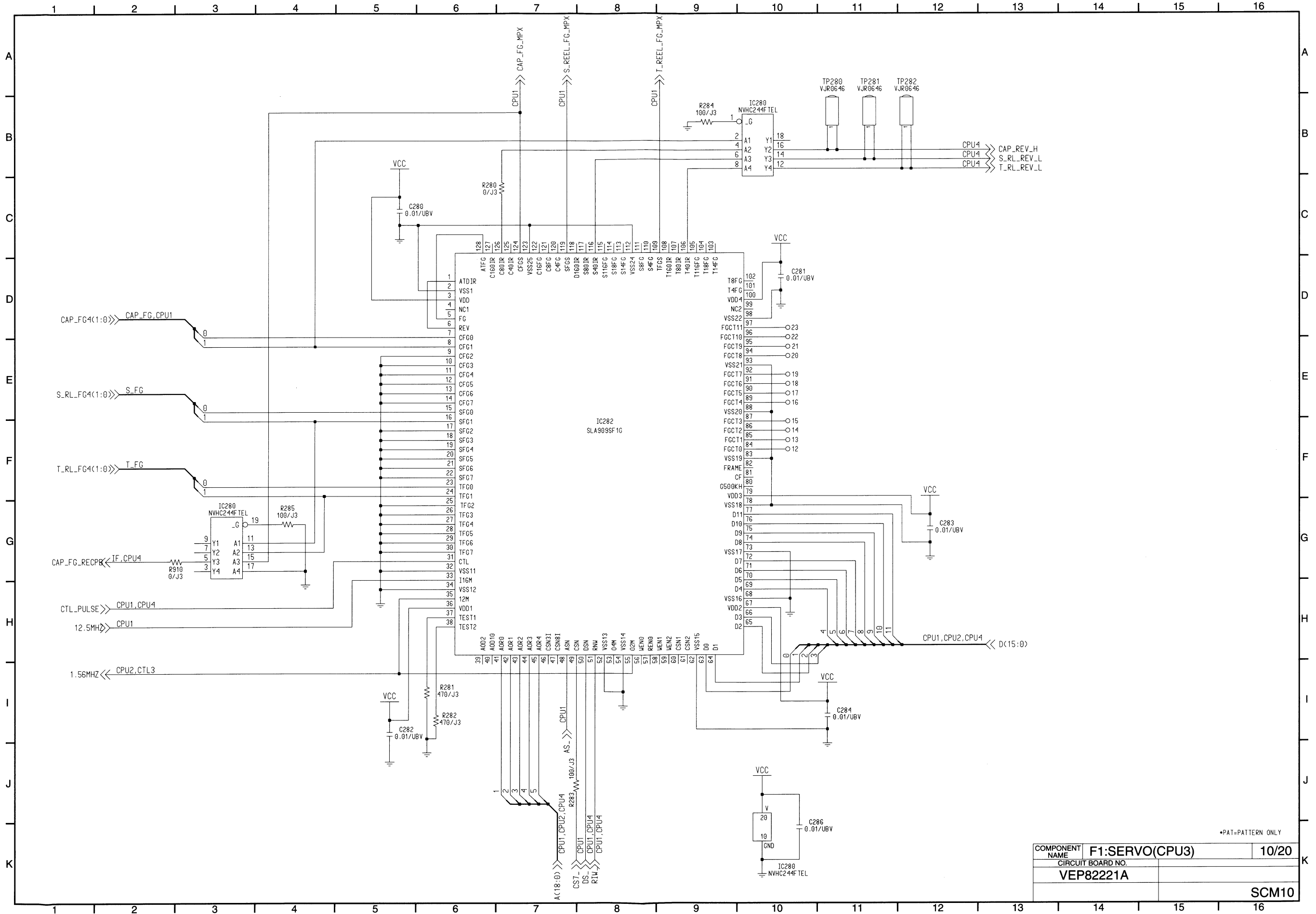




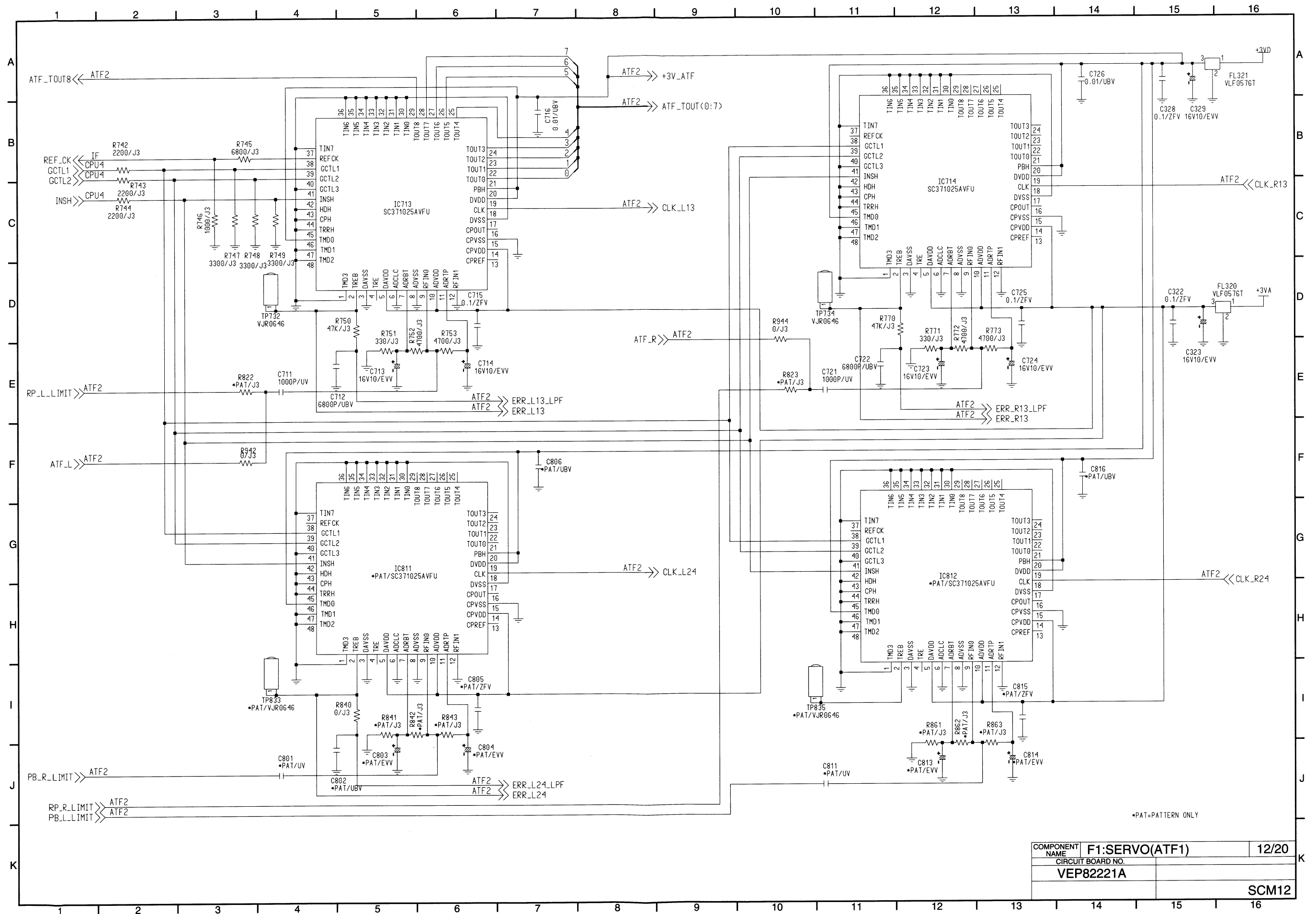
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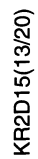


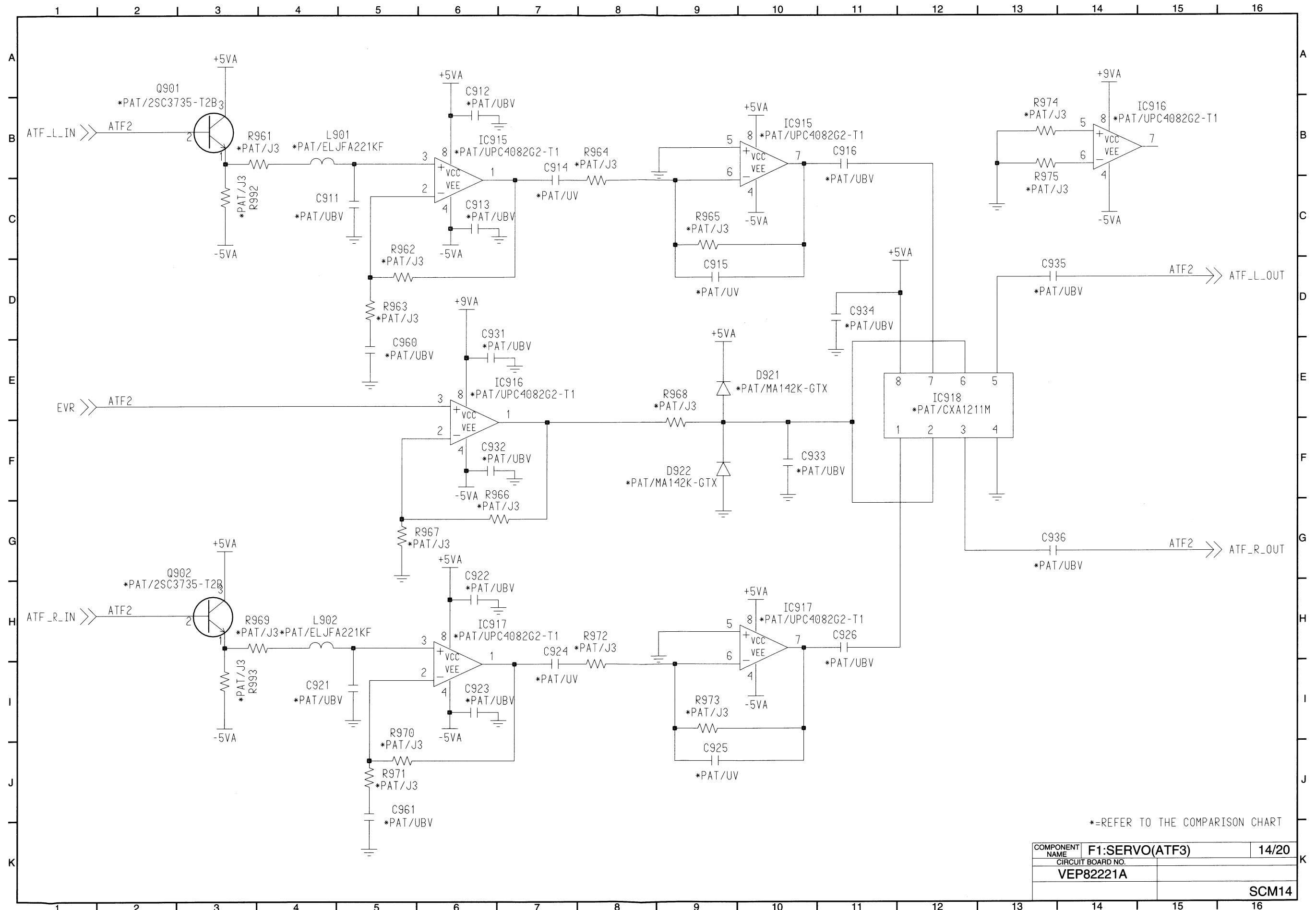
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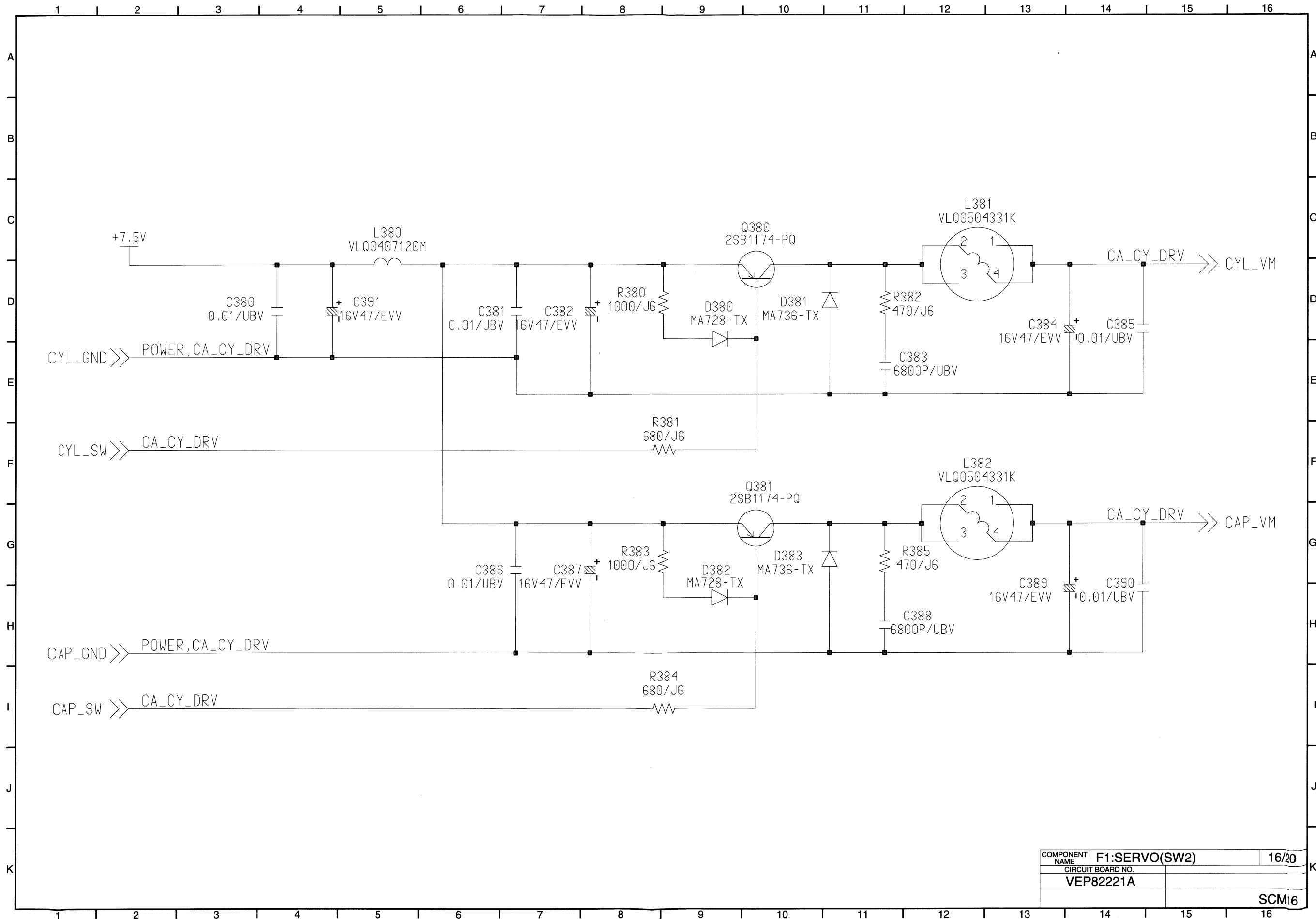


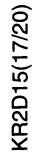
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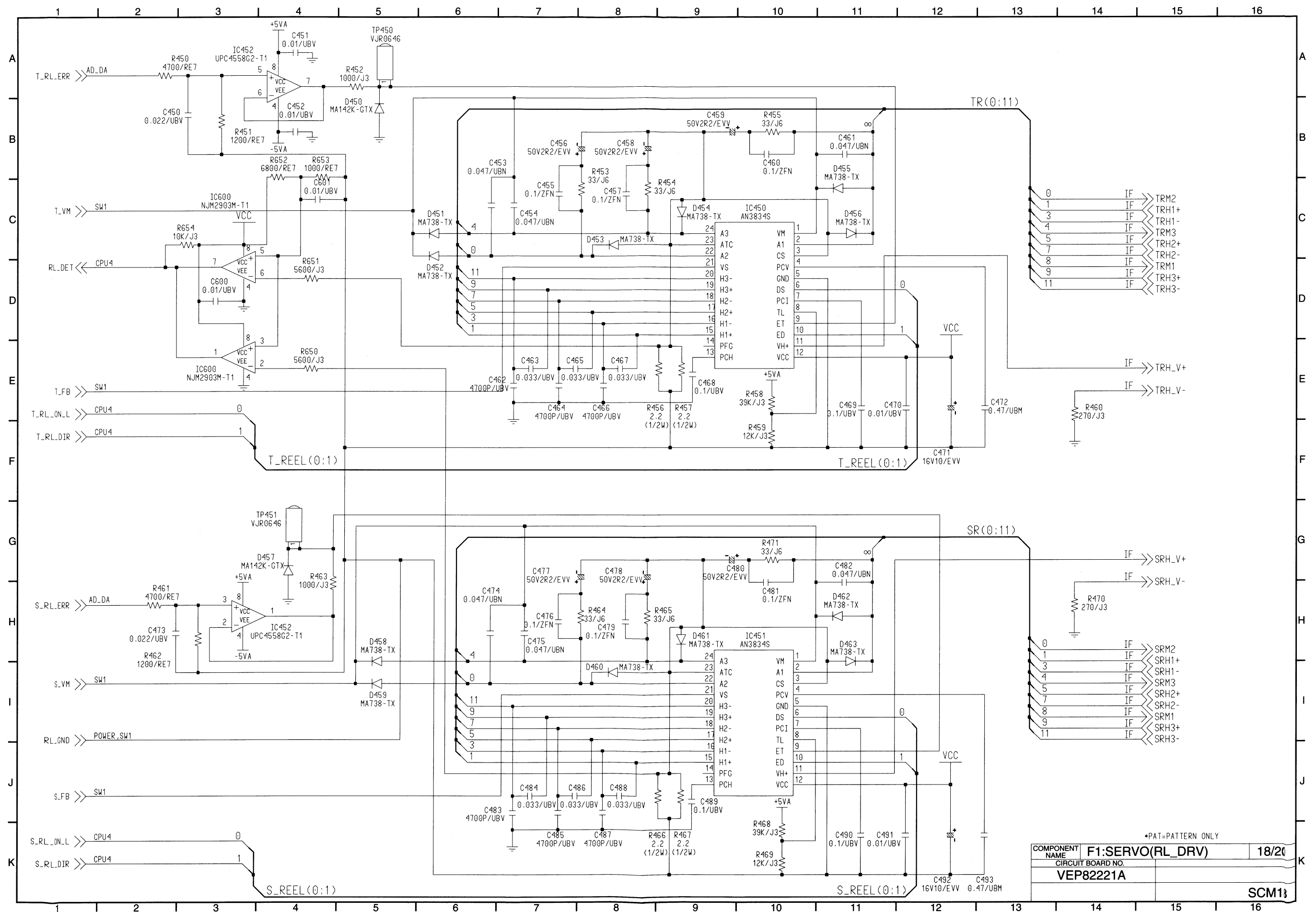




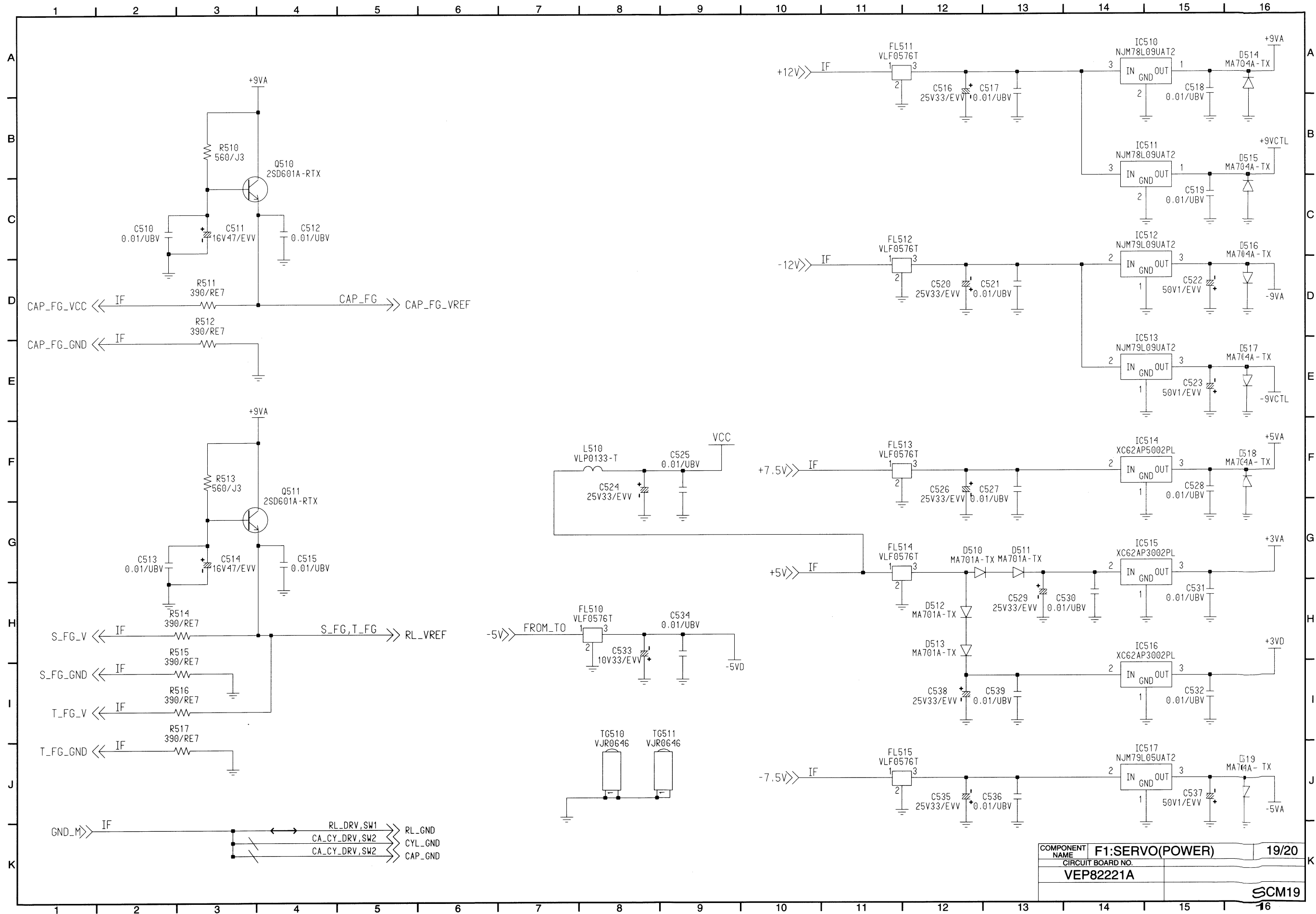




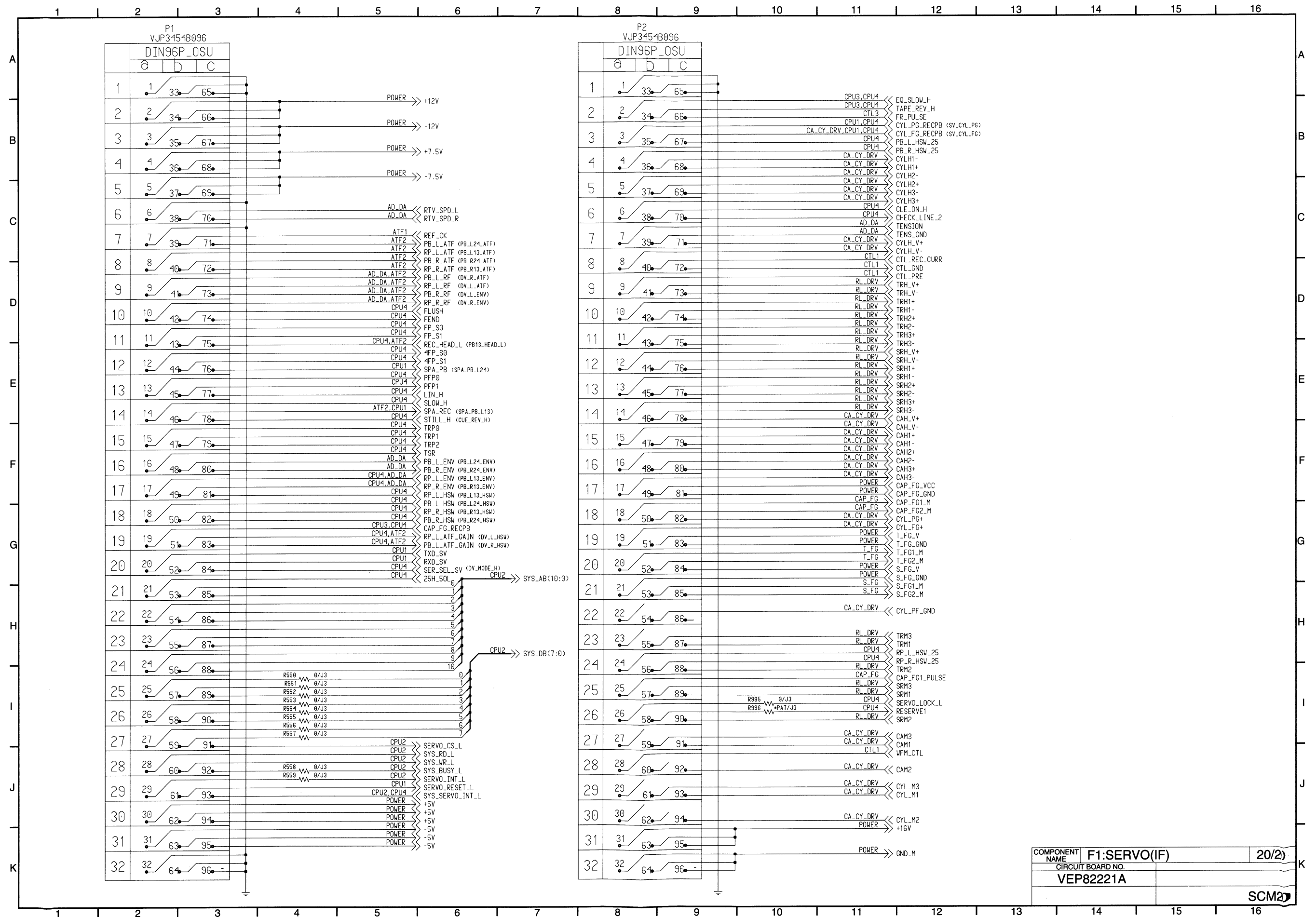




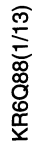
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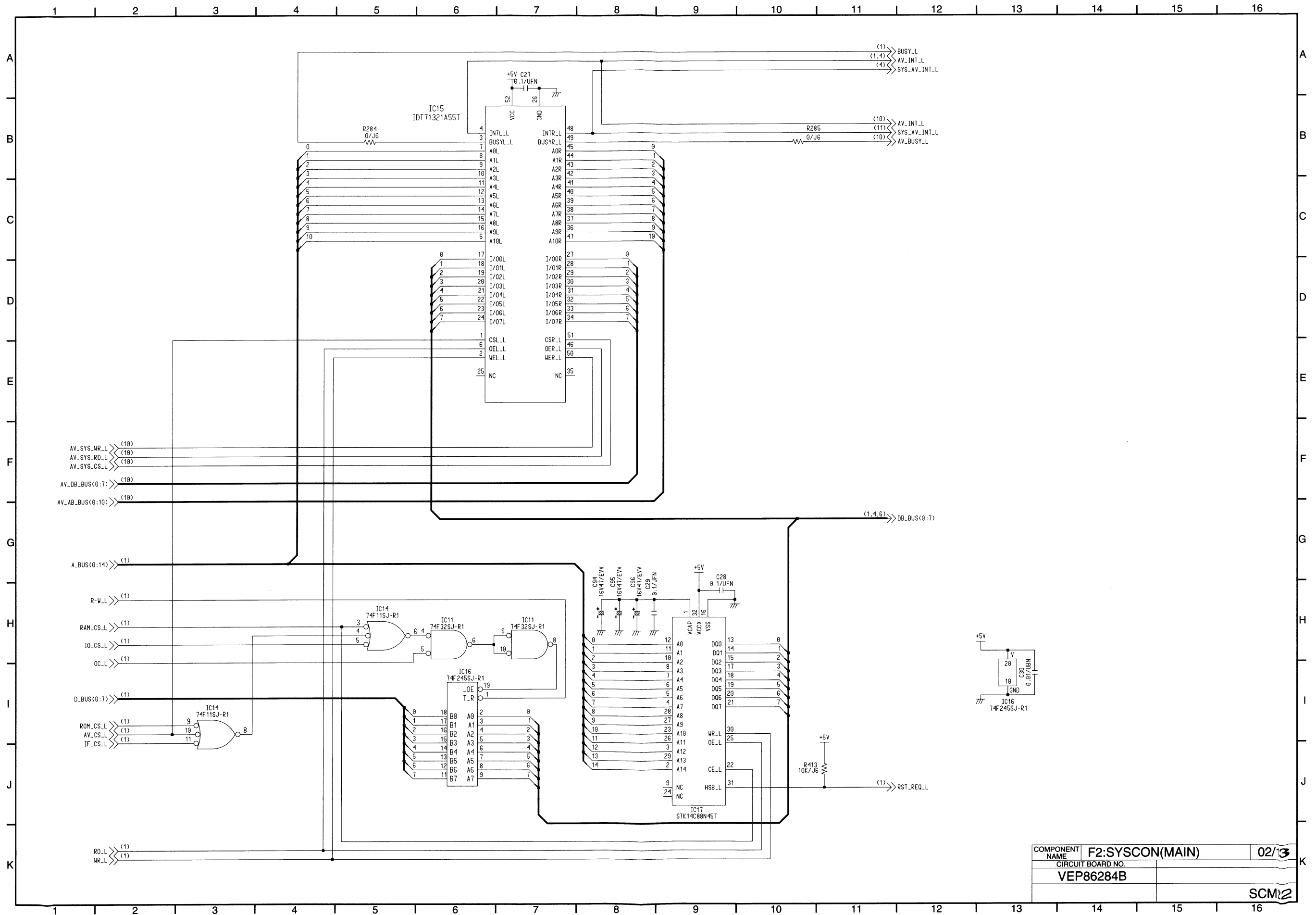
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CIRCUIT BOARD NO.	VEP82221A	
		SCM19



COMPONENT NAME	F1:SERVO(IF)	20/20
CIRCUIT BOARD NO.	VEP82221A	
		SCM20



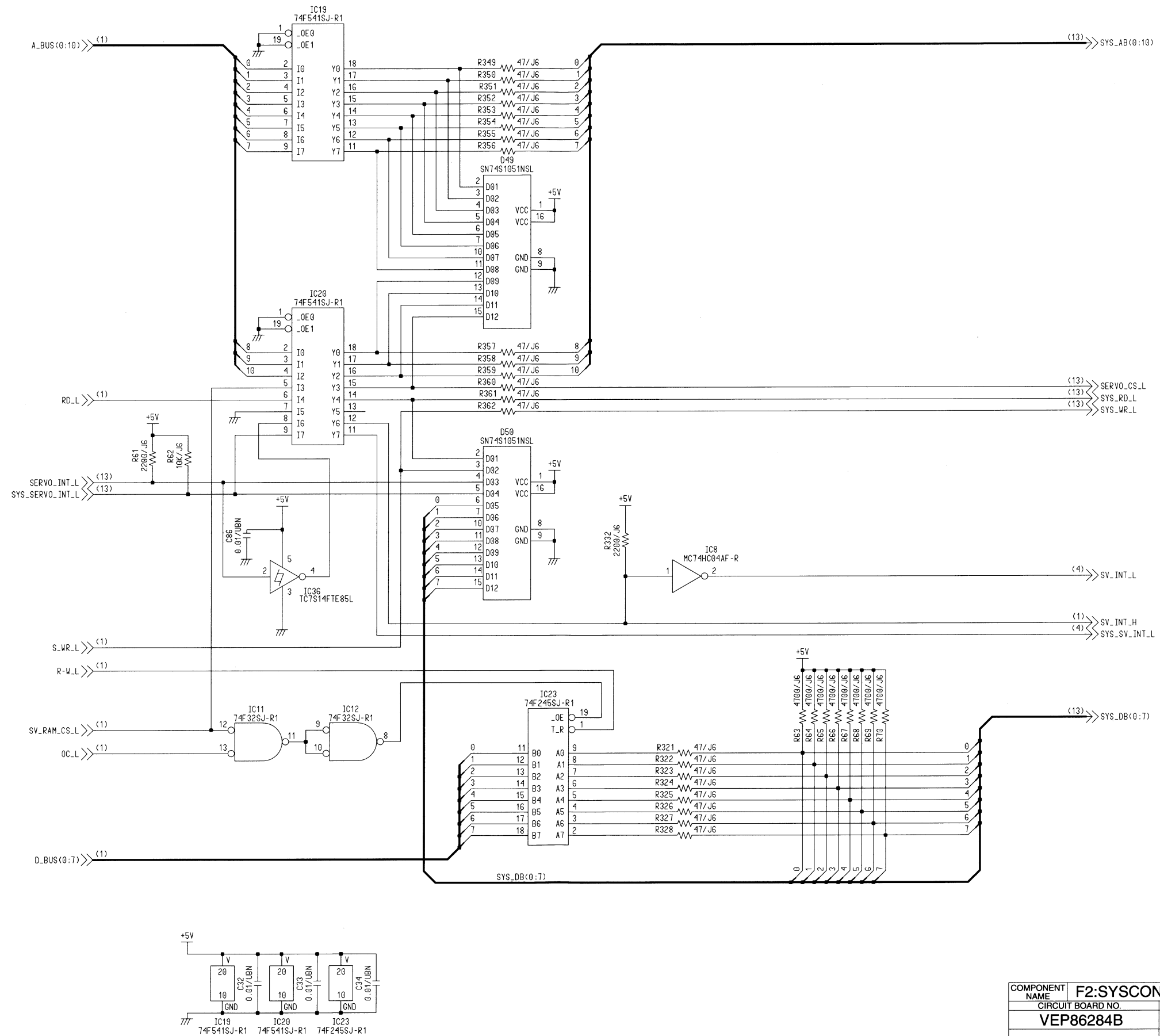
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CIRCUIT BOARD NO.			
VEP86284B			
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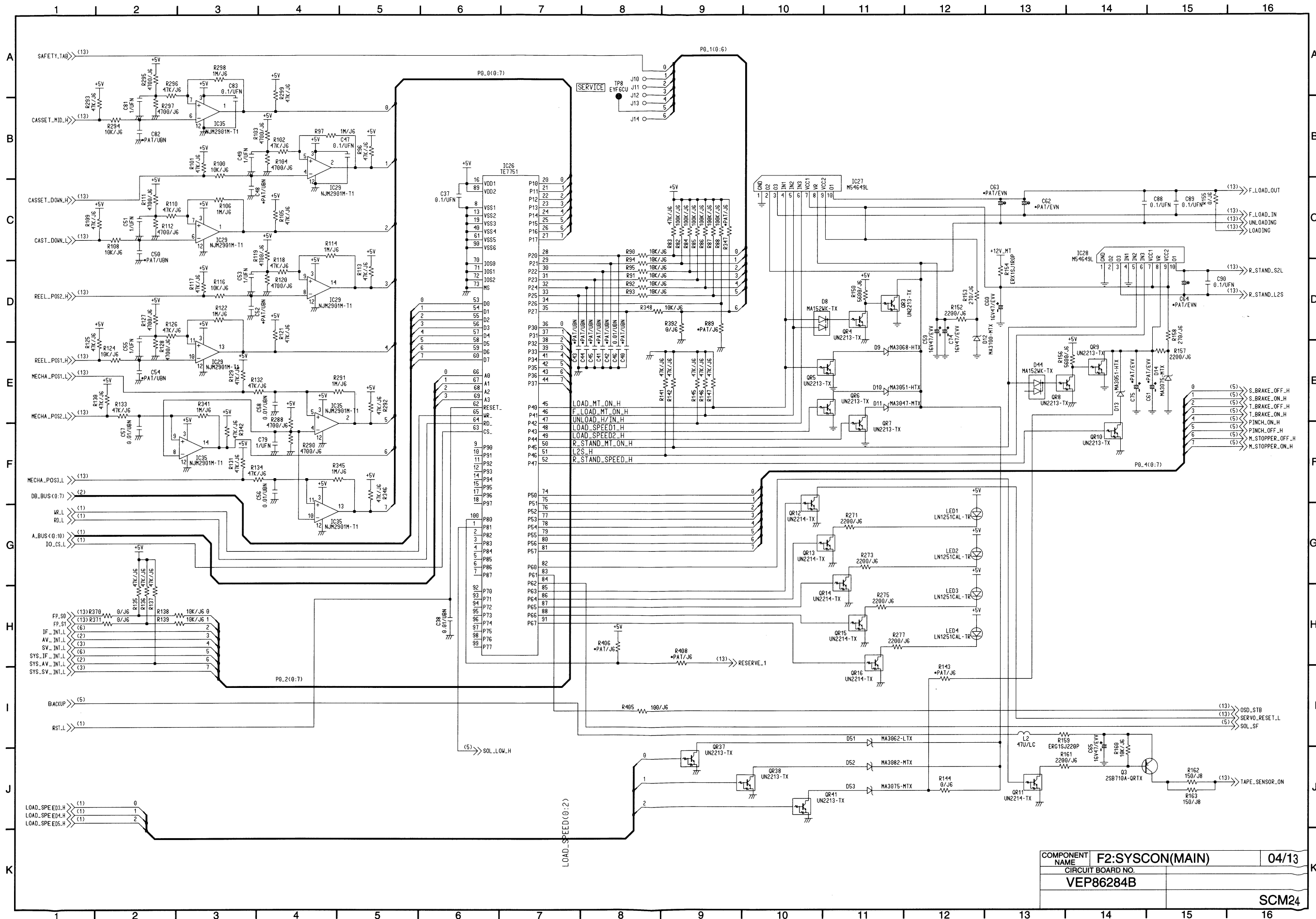


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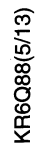
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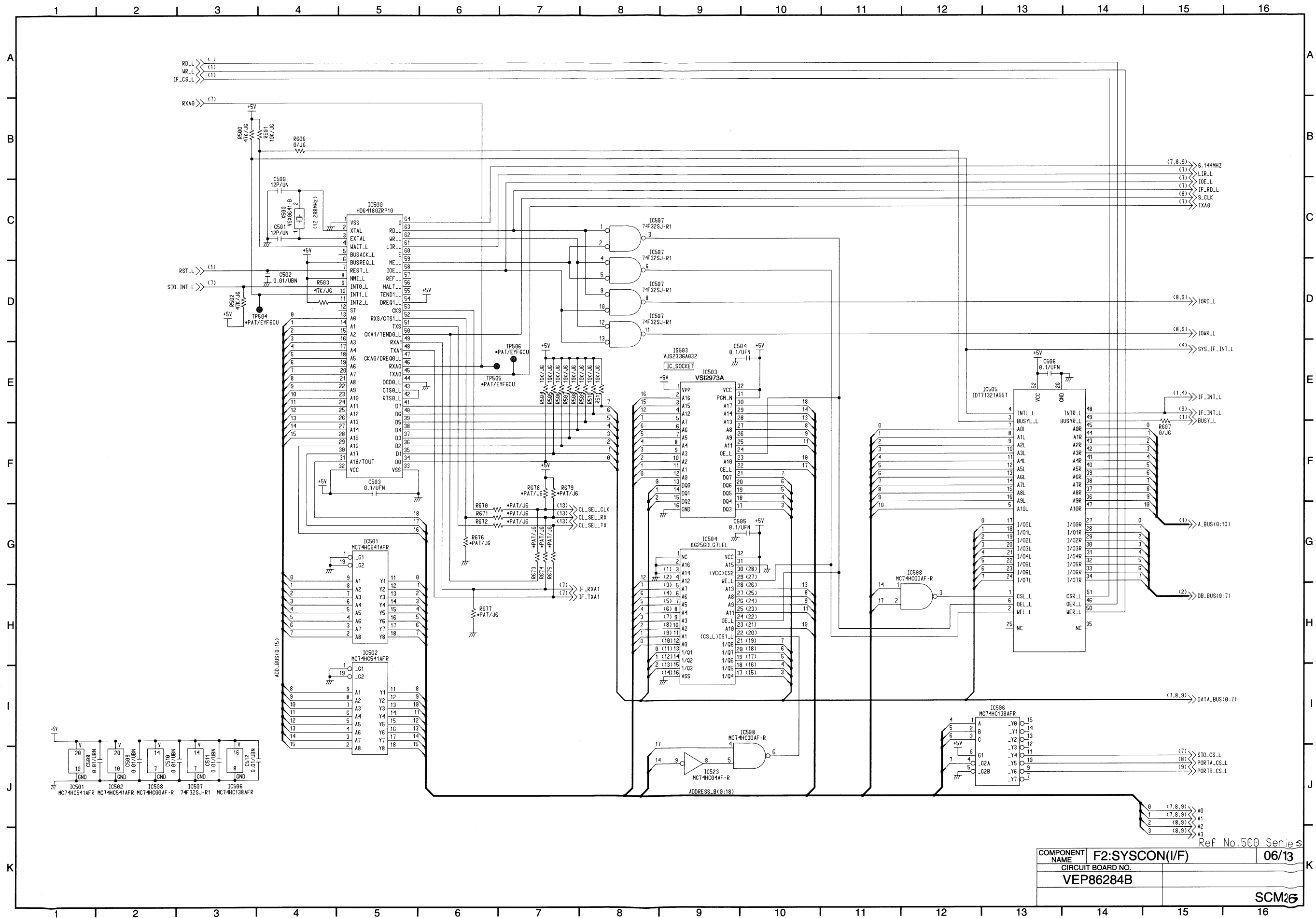




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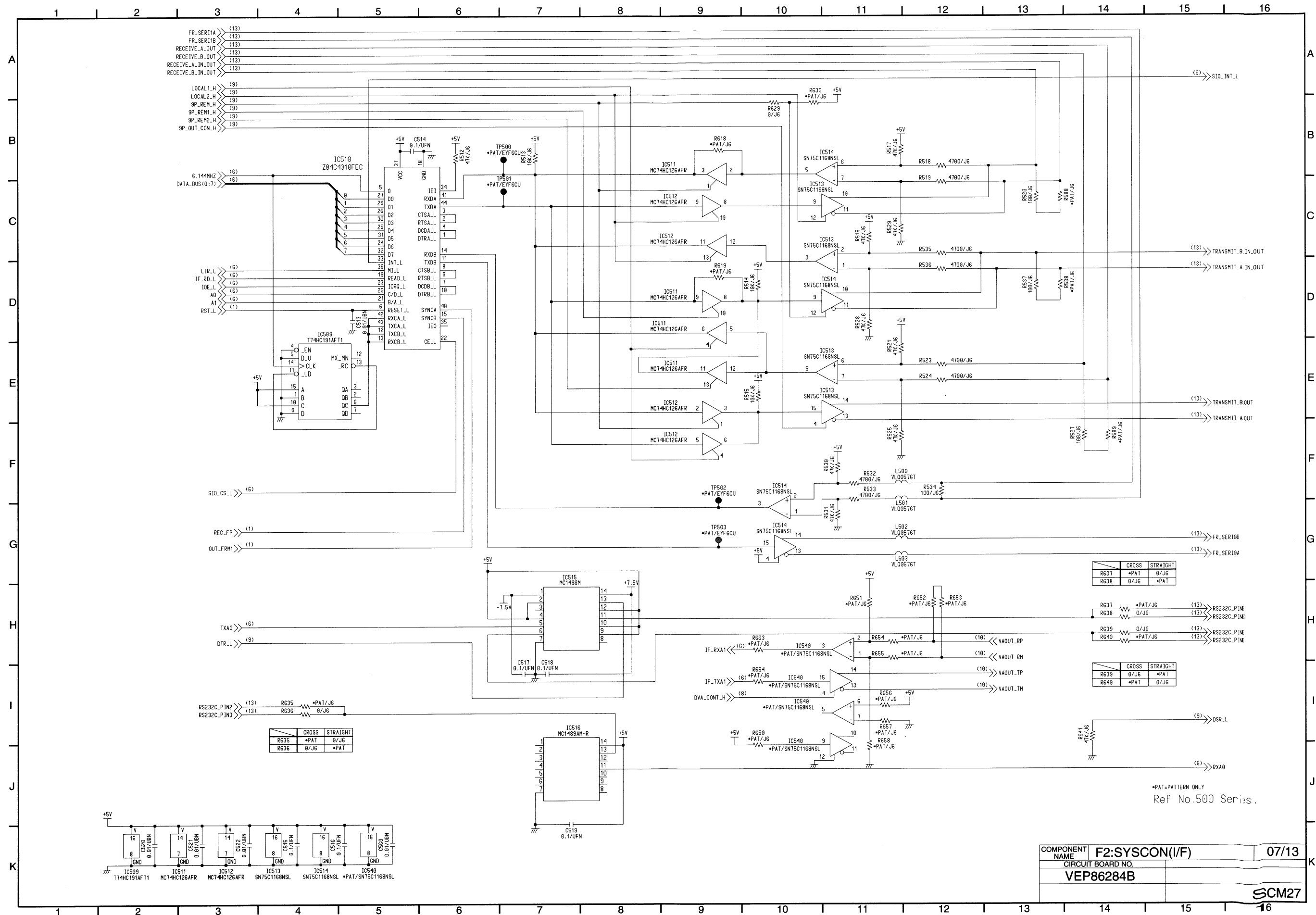


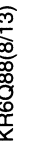
S CM25



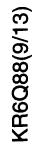
COMPONENT NAME	F2:SYSCON(I/F)	06/13
CIRCUIT BOARD NO.	VEP86284B	
SCM26		

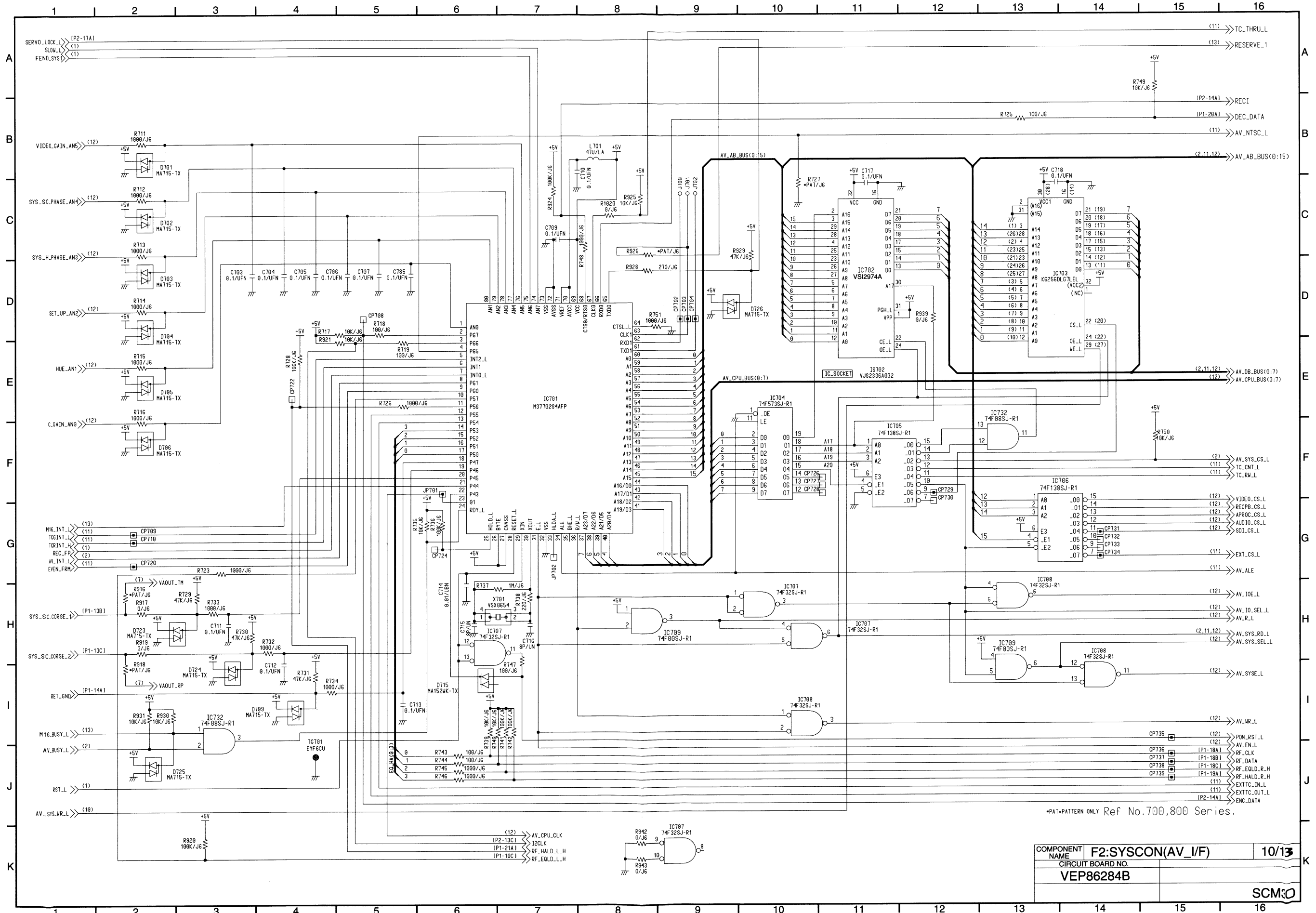
KR6Q88(6/13)





COMPONENT NAME	F2:SYSCON(I/F)	0813
CIRCUIT BOARD NO.		
VEP86284B		
		SCN28

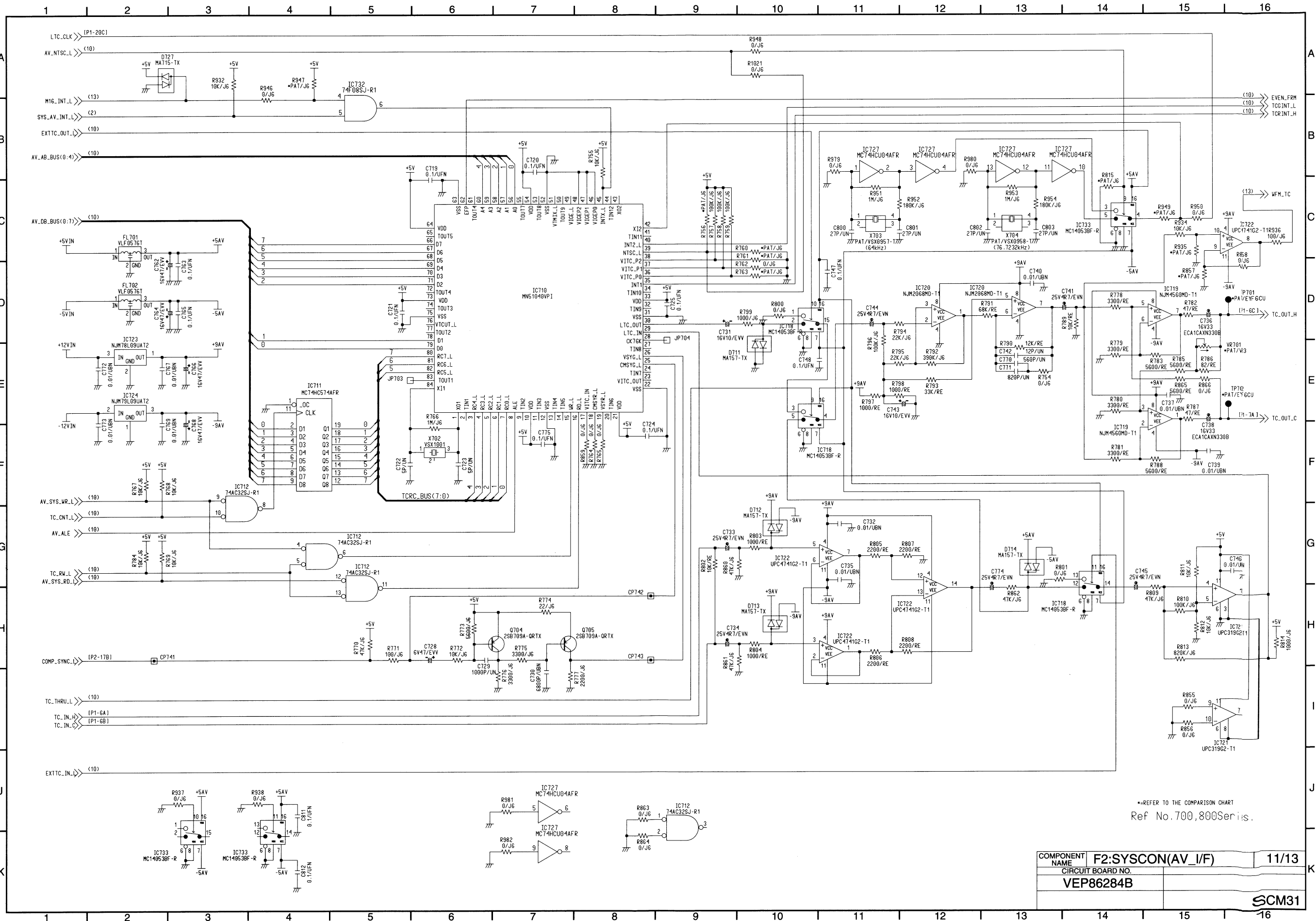




*PAT= PATTERN ONLY Ref No.700,800 Series.

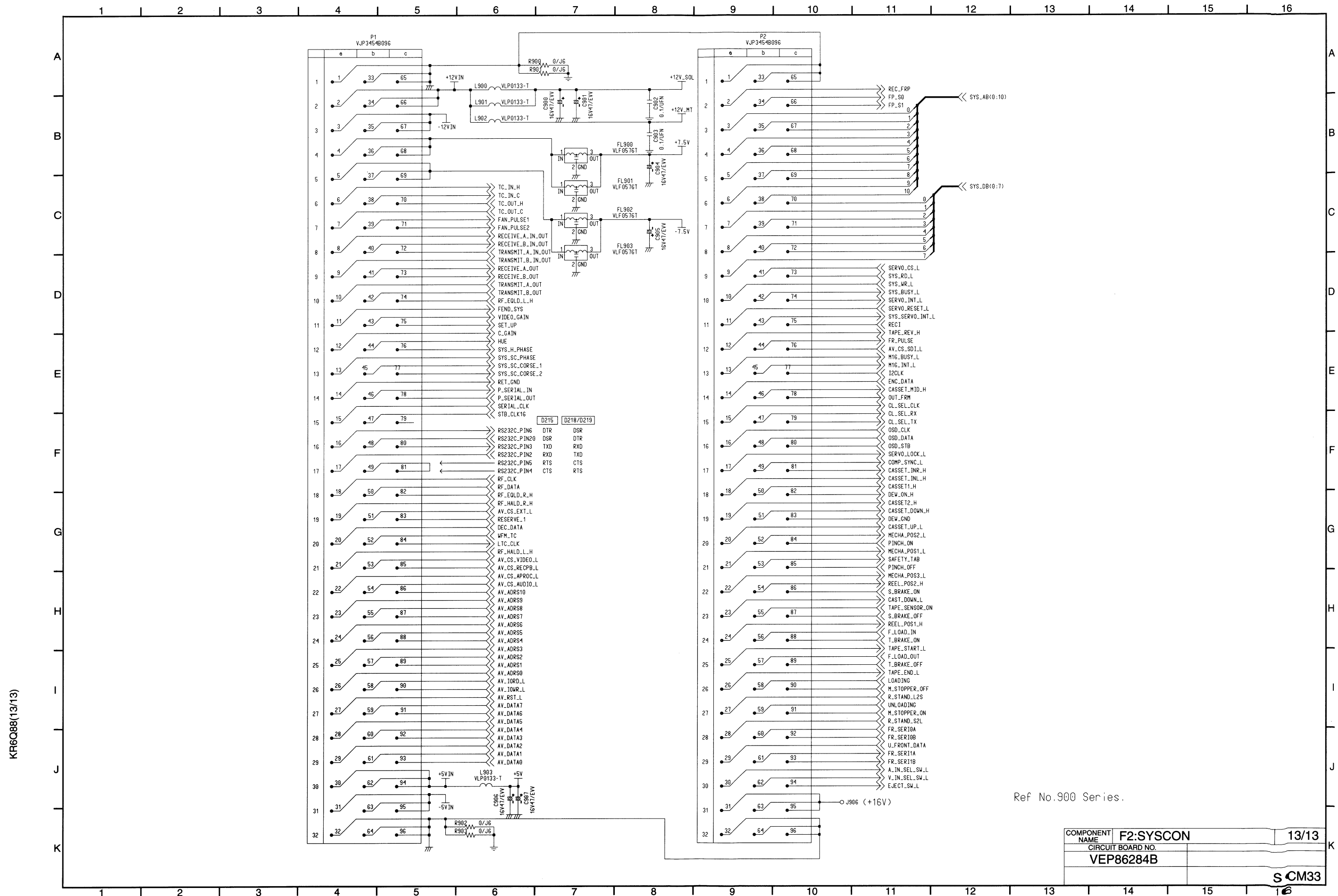
COMPONENT NAME	F2:SYSCON(AV_I/F)	10/13
CIRCUIT BOARD NO.	VEP86284B	
SCM30		

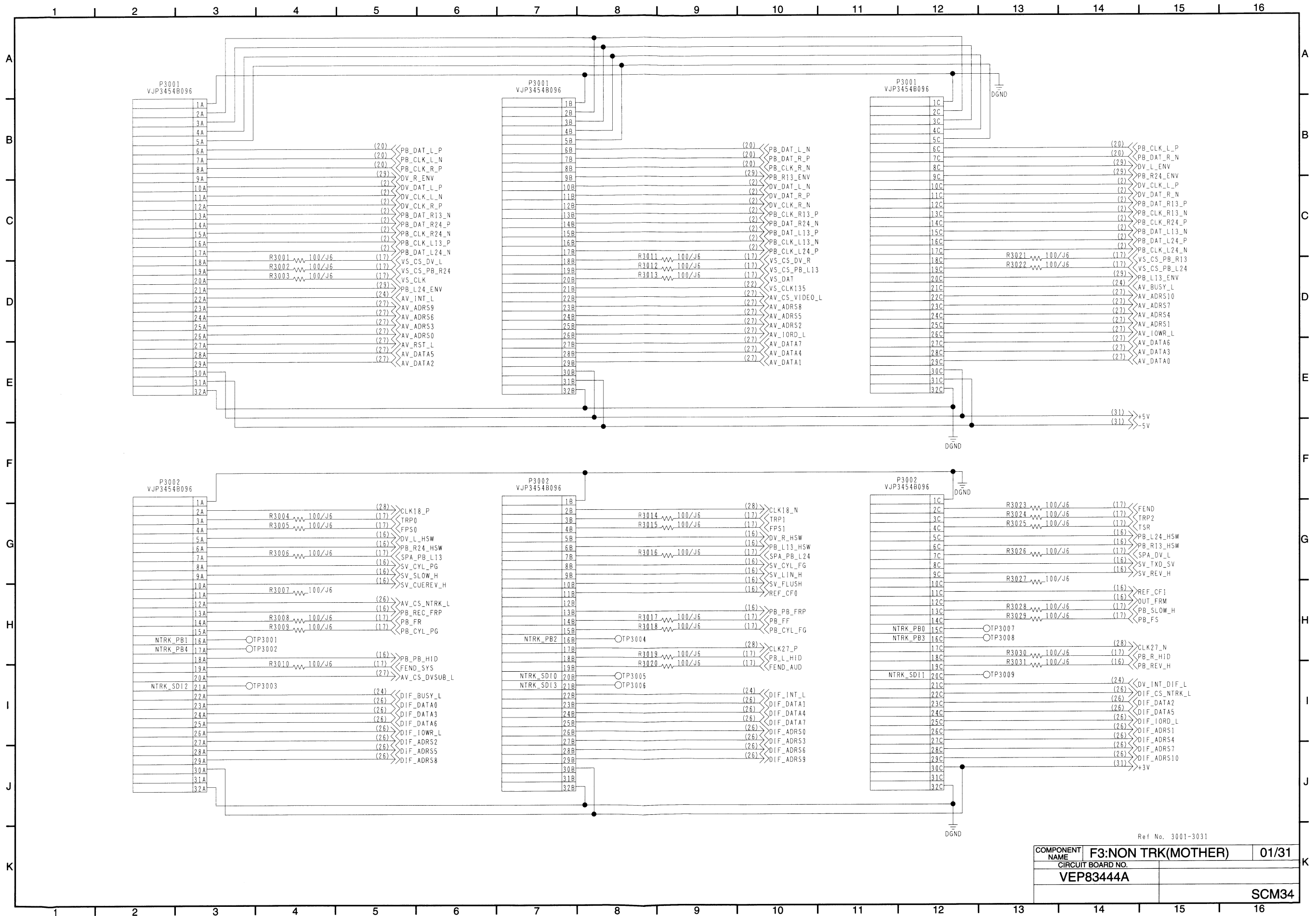
KR6Q88(11/13)



REFER TO THE COMPARISON CHART
Ref No.700,800Series.

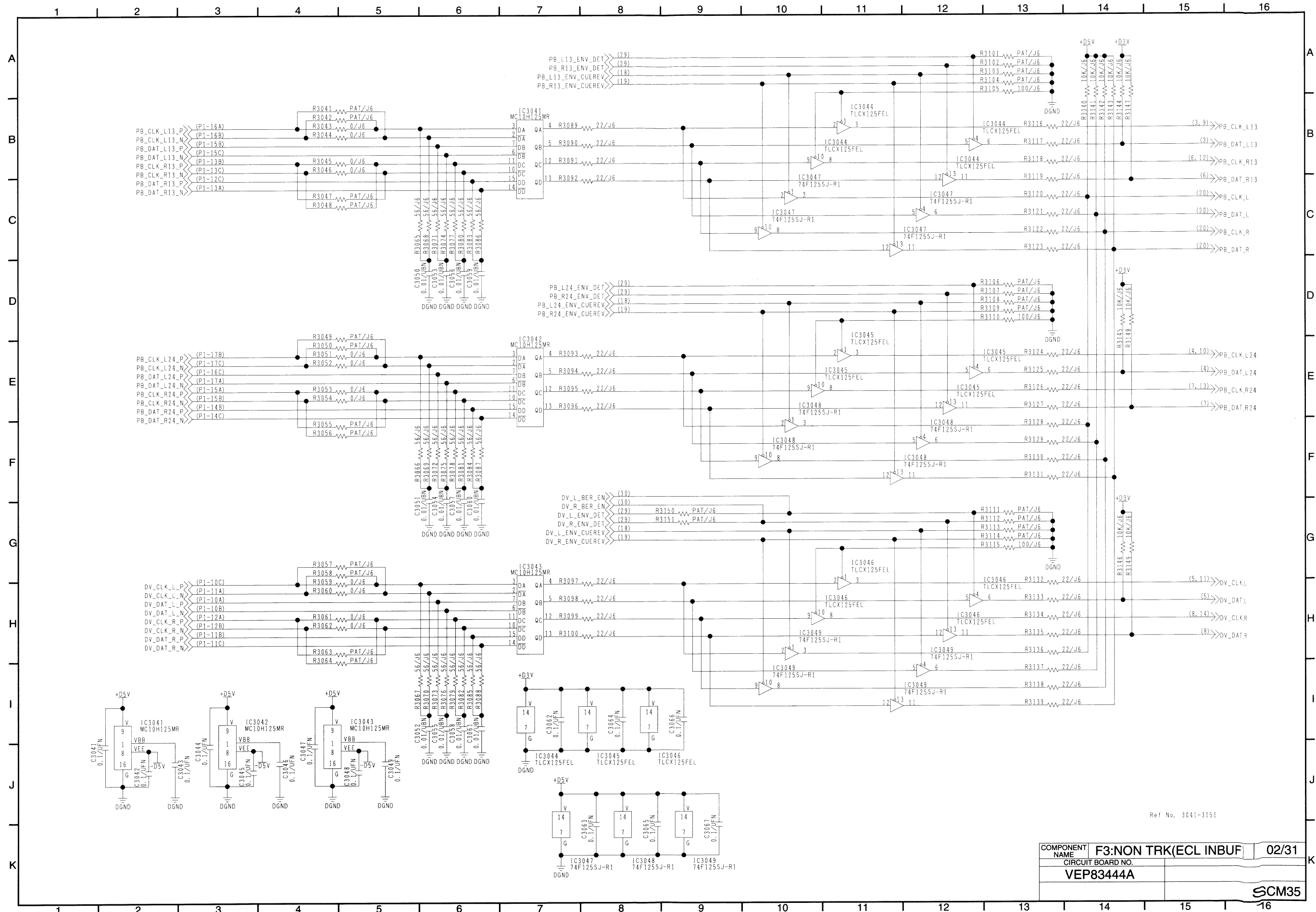
COMPONENT NAME	F2:SYS CON(AV_I/F)	11/13
CIRCUIT BOARD NO.	VEP86284B	
SCM31		





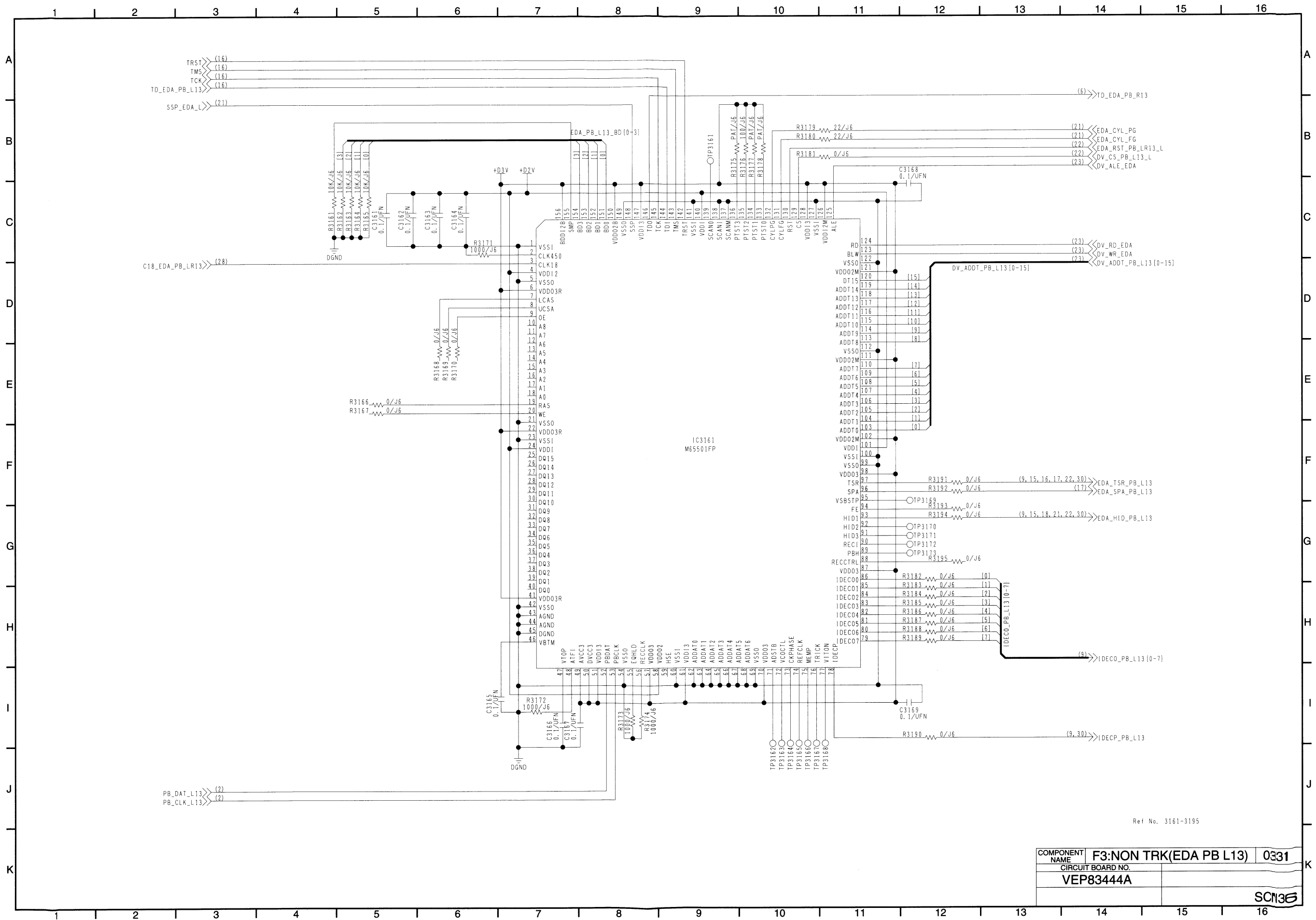
Ref No. 3001-3031		
COMPONENT NAME	F3:NON TRK(MOTHER)	01/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM34

KR3V92(2/31)



Ref No. 3041-3151

COMPONENT NAME	F3:NON TRK(ECL INBUF)	02/31
CIRCUIT BOARD NO.	VEP83444A	
SCM35		

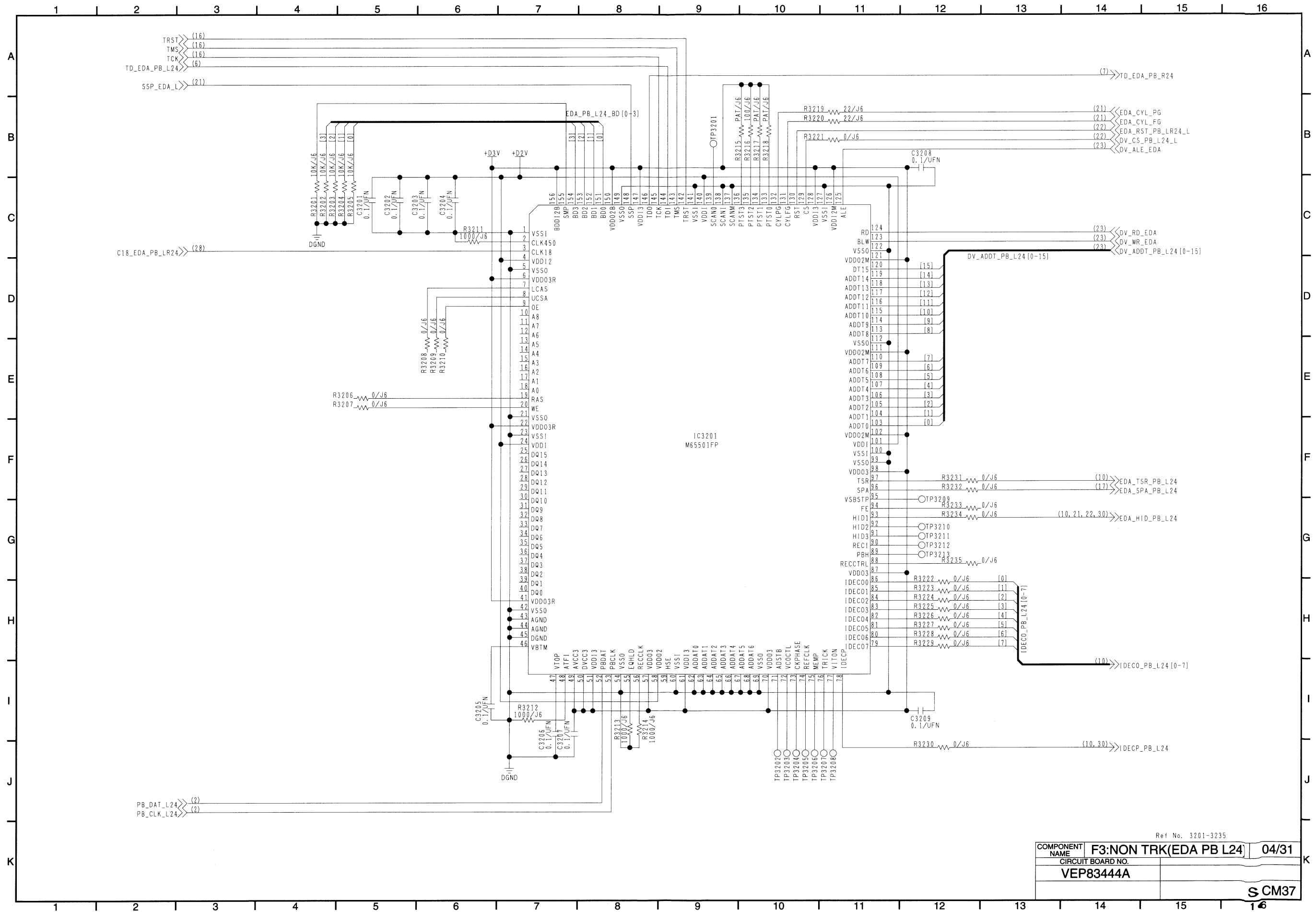


Ref No. 3161-3195

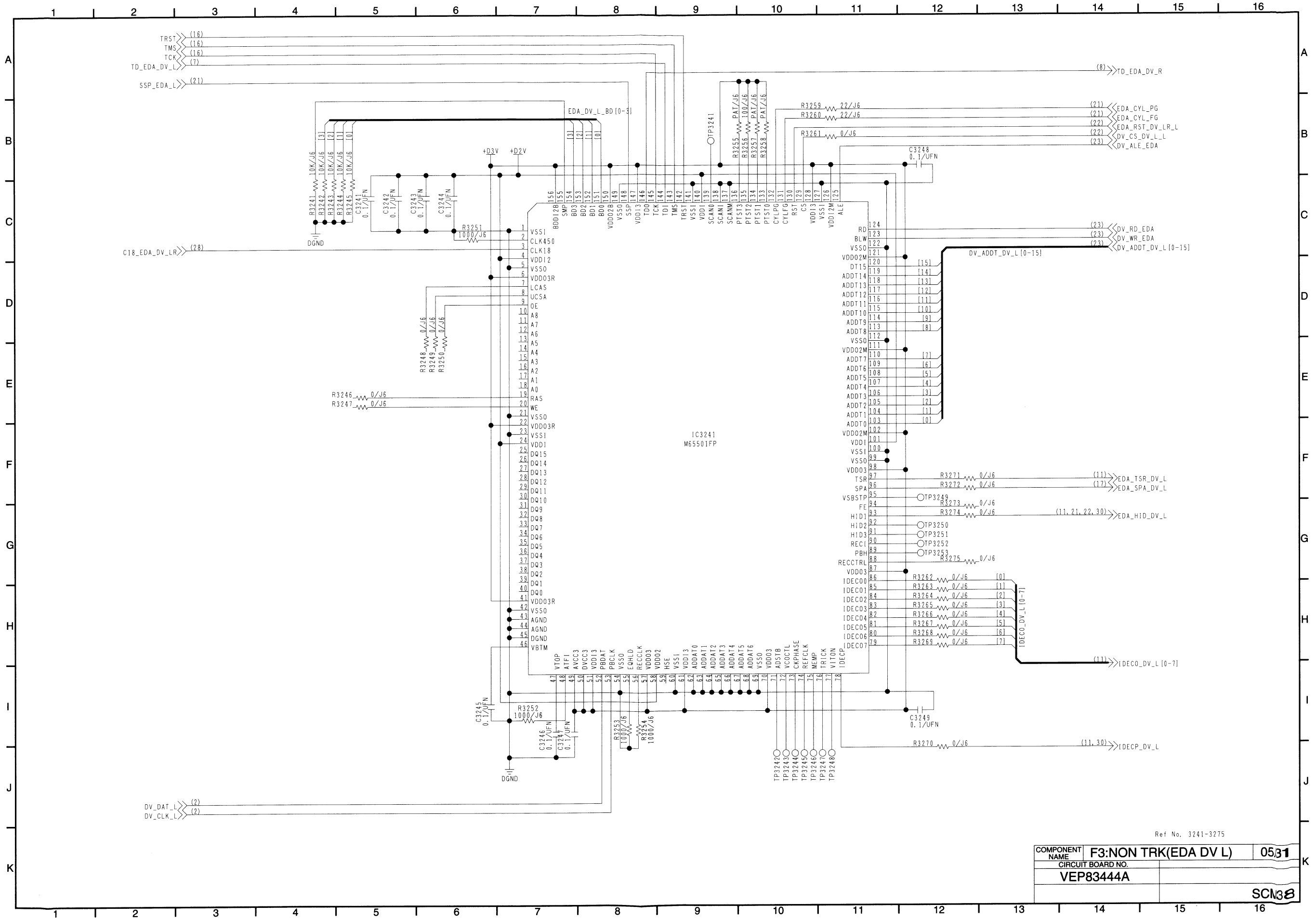
COMPONENT NAME	F3:NON TRK(EDA PB L13)	0331
CIRCUIT BOARD NO.	VEP83444A	
		SCN136

KR3V92(3/31)

KR3V92(4/31)



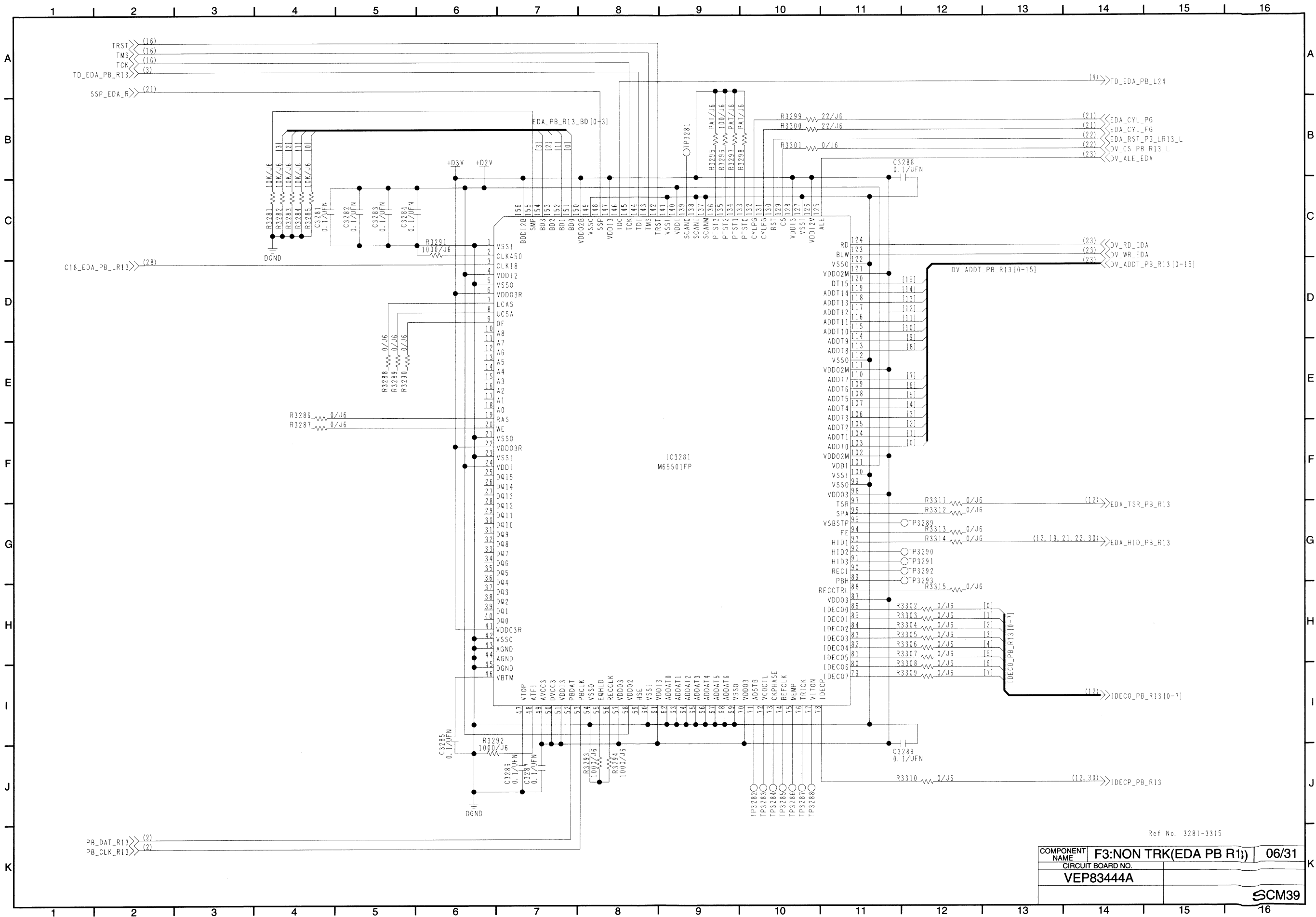
Ref No. 3201-3235		
COMPONENT NAME	F3:NON TRK(EDA PB L24)	04/31
CIRCUIT BOARD NO.	VEP83444A	
		S CM37



Ref No. 3241-3275		
COMPONENT NAME	F3:NON TRK(EDA DV L)	0531
CIRCUIT BOARD NO.	VEP83444A	
		SCN38

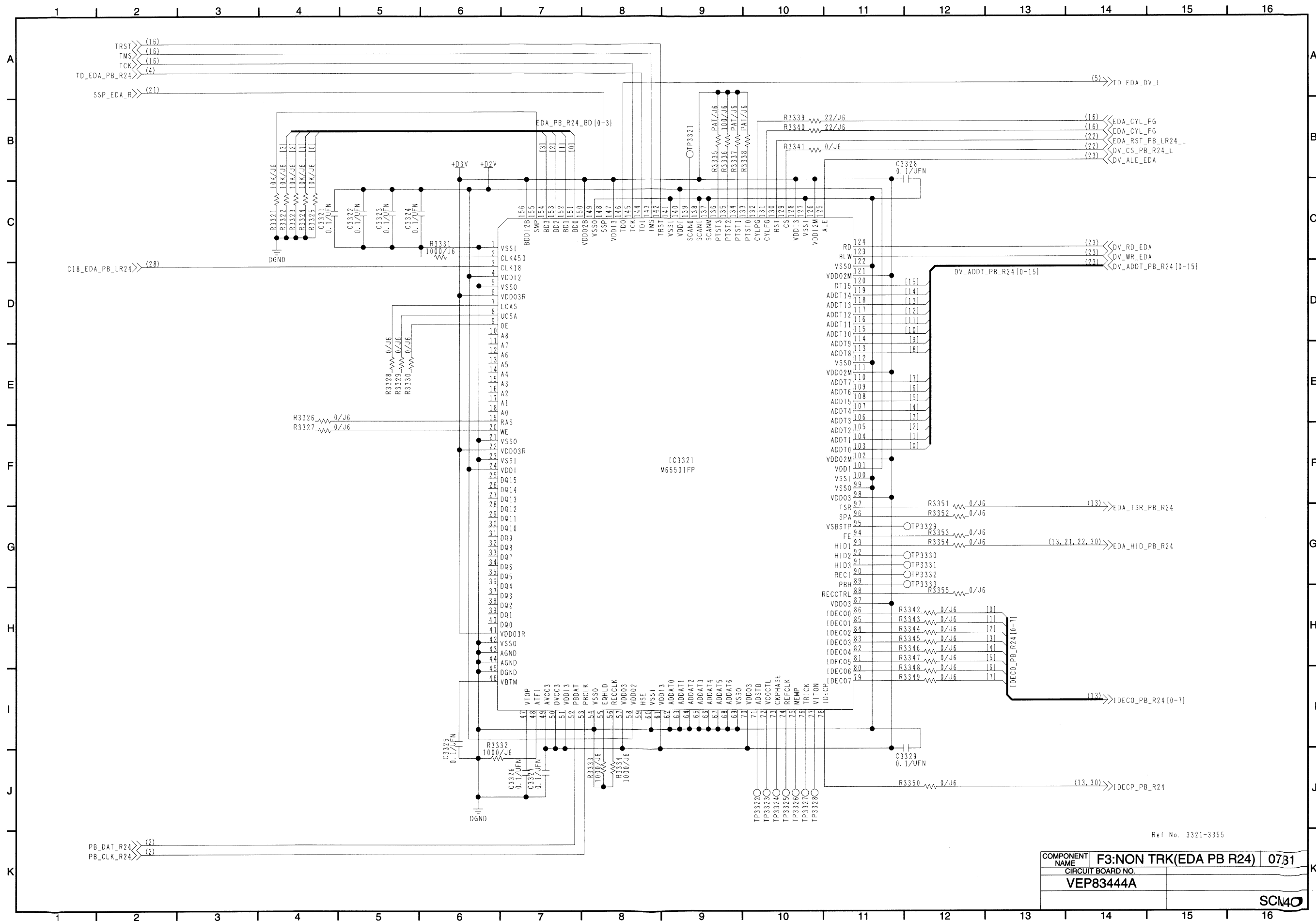
KR3V92(5/31)

KR3V92(6/31)



Ref No. 3281-3315

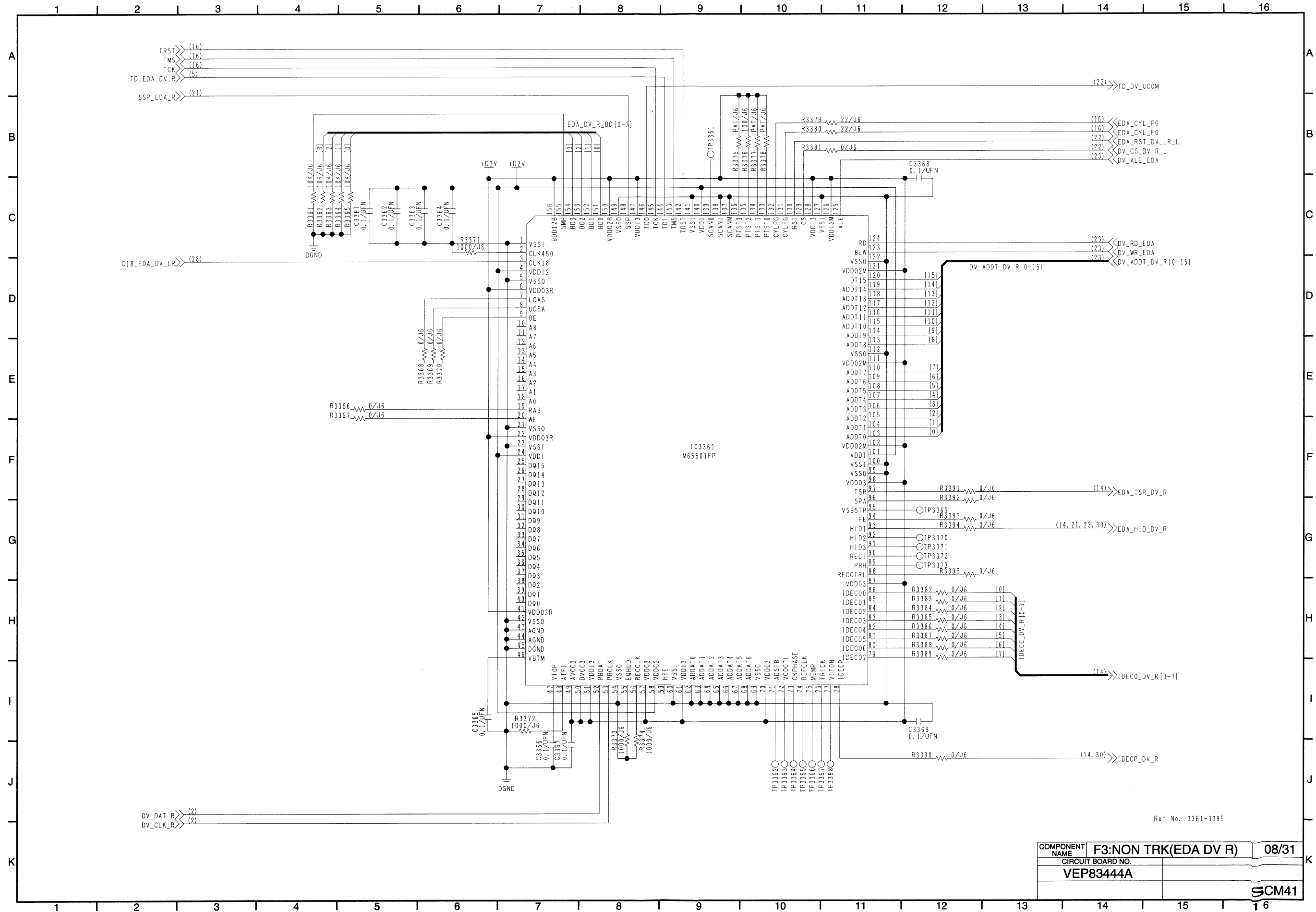
COMPONENT NAME	F3:NON TRK(EDA PB R1)	06/31
CIRCUIT BOARD NO.	VEP83444A	
SCM39		

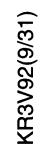


Ref No. 3321-3355

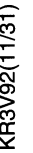
COMPONENT NAME	F3:NON TRK(EDA PB R24)	0731
CIRCUIT BOARD NO.	VEP83444A	
SCN40		

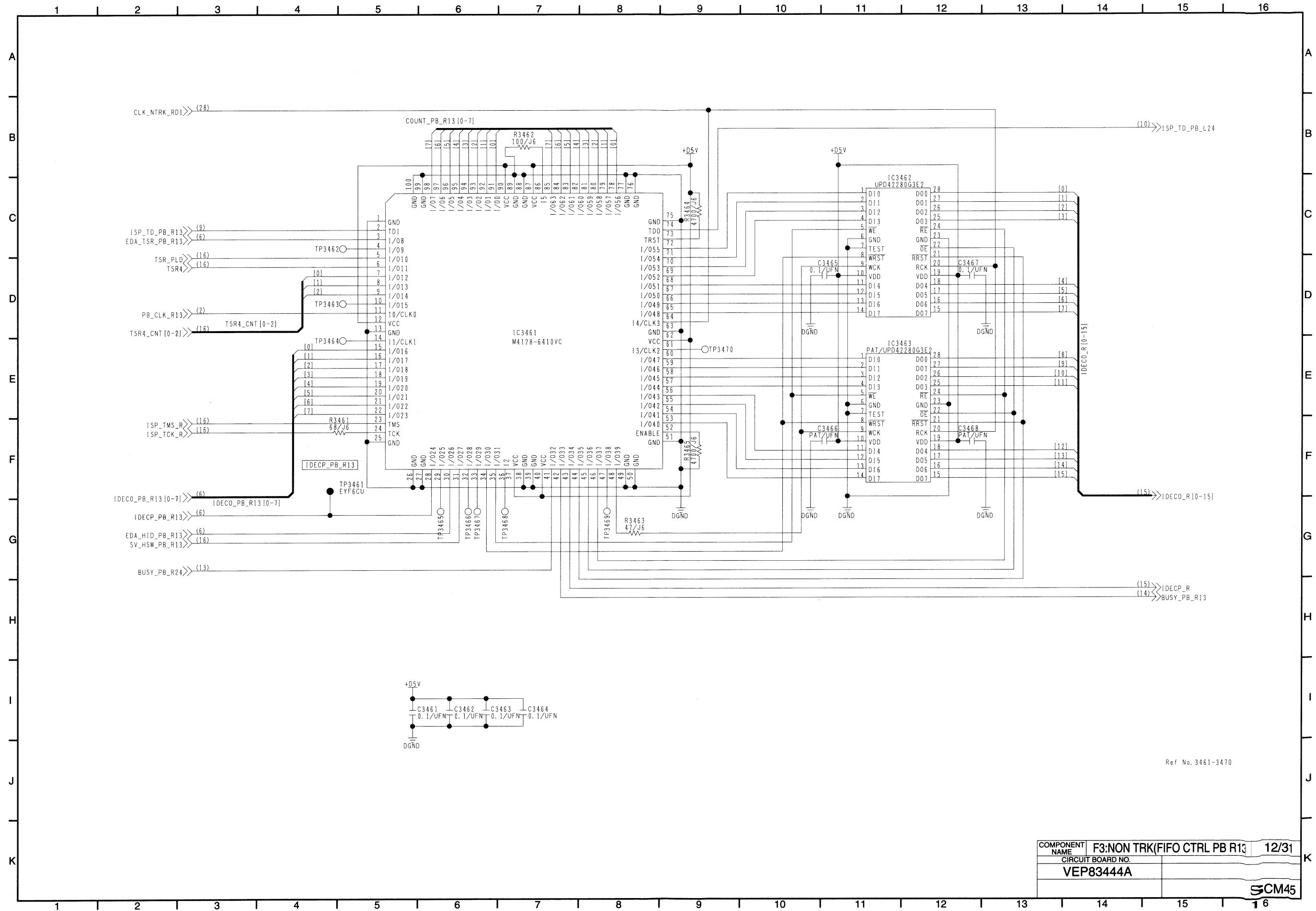
KR3V92(7/31)





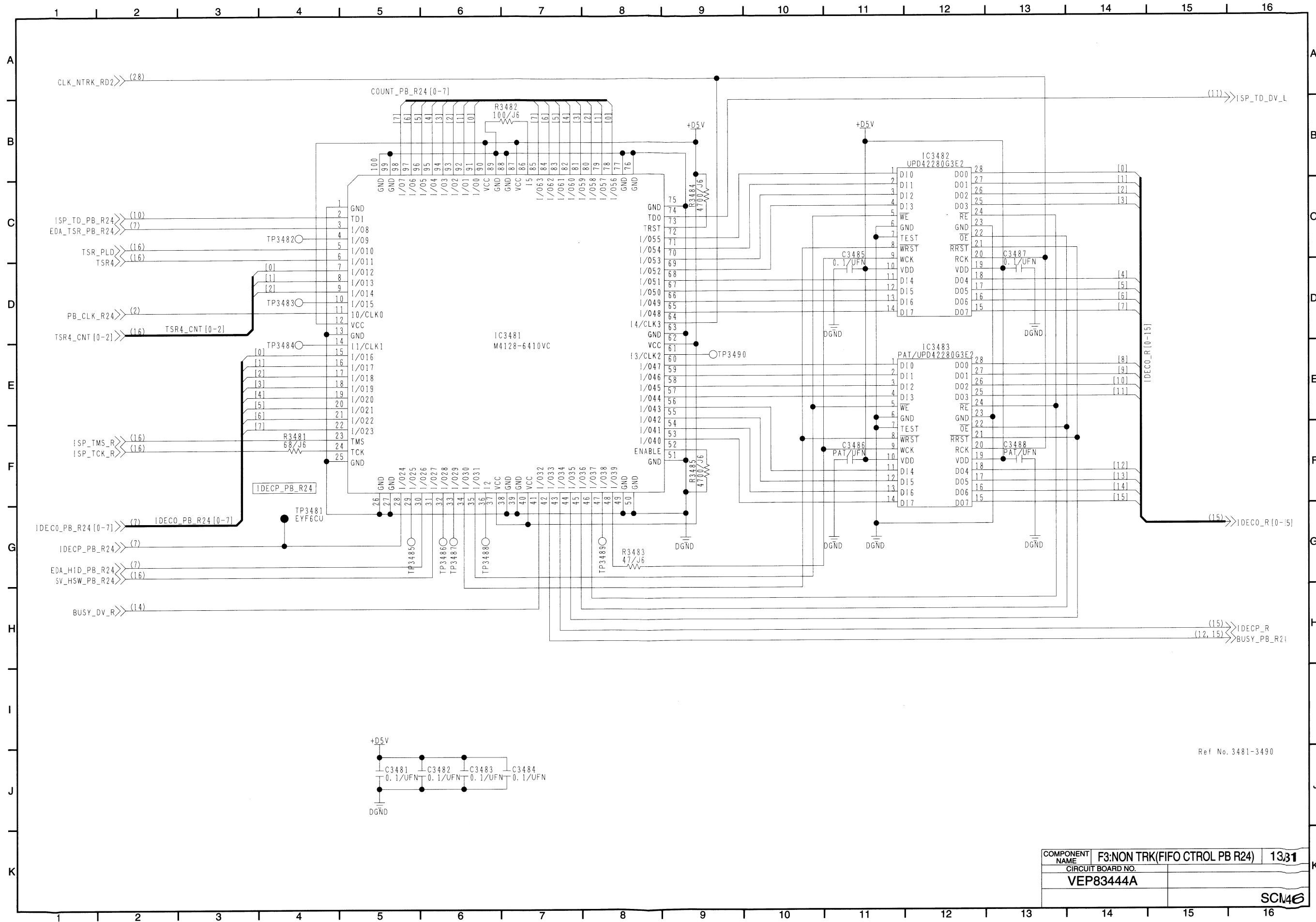






Ref No. 3461-3470

COMPONENT NAME	F3:NON TRK(FIFO CTRL PB R13)	12/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM45

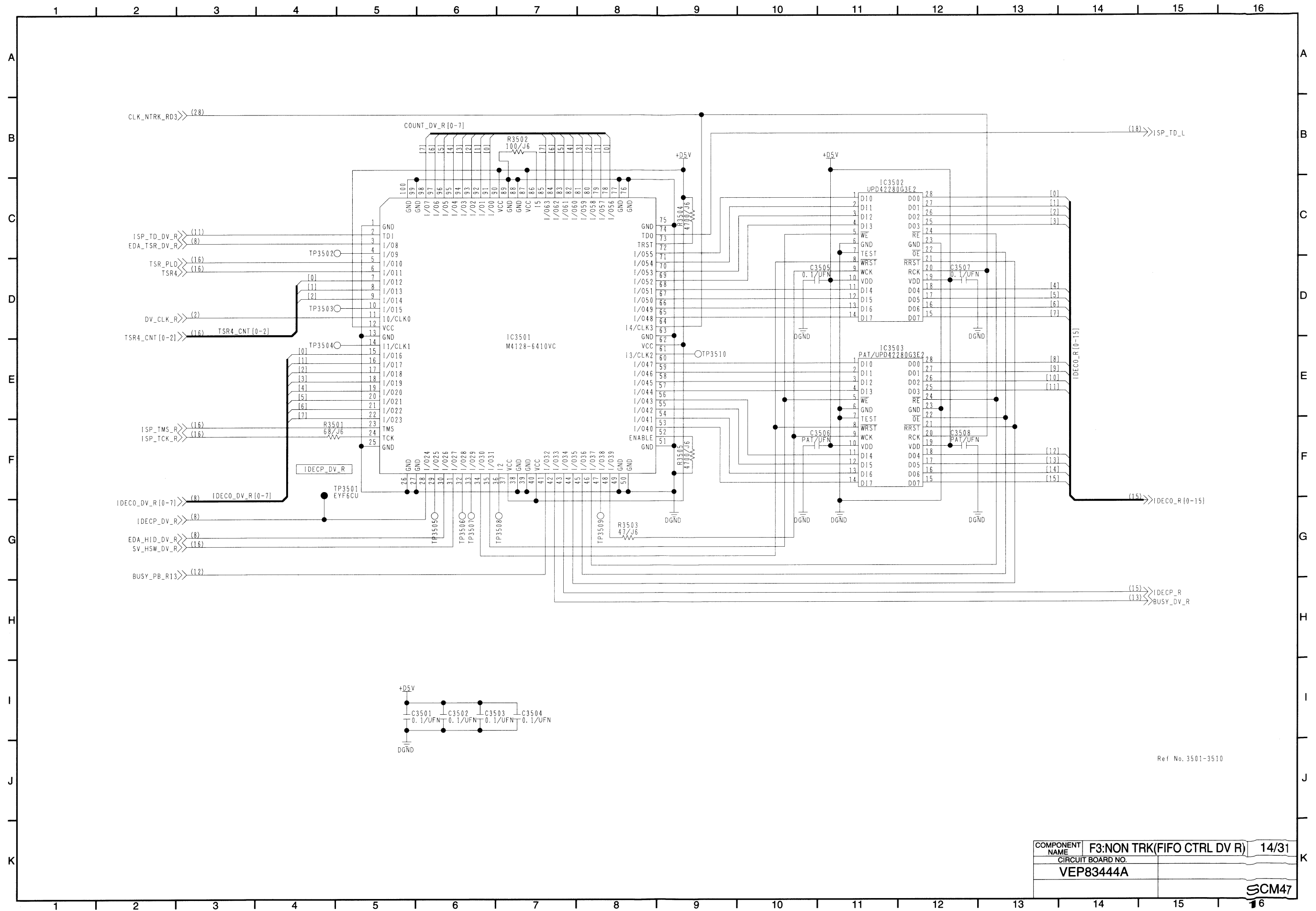


Ref No. 3481-3490

COMPONENT NAME	F3:NON TRK(FIFO CTROL PB R24)	1331
CIRCUIT BOARD NO.	VEP83444A	
SCM46		

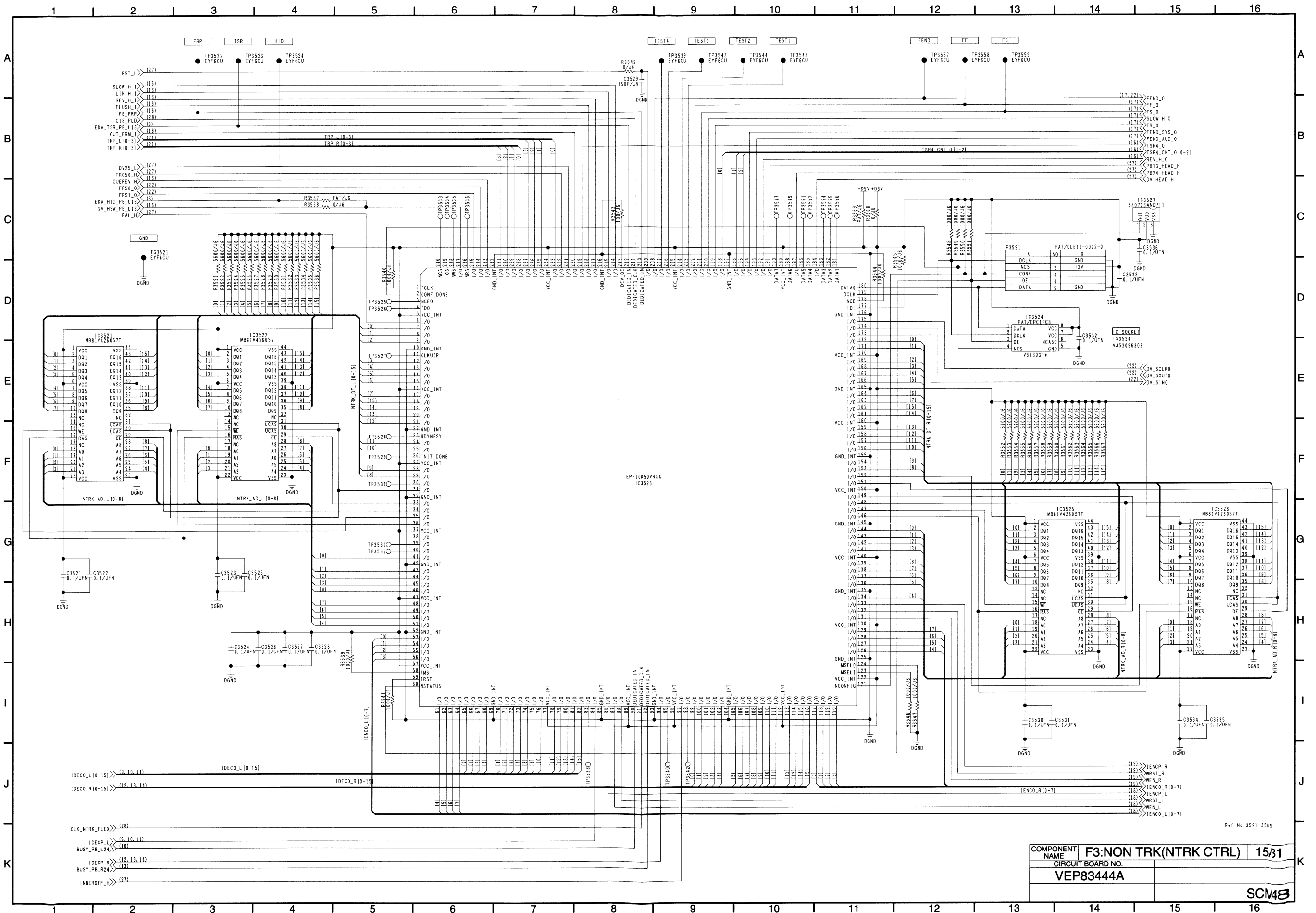
KR3V92(13/31)

KR3V92(14/31)



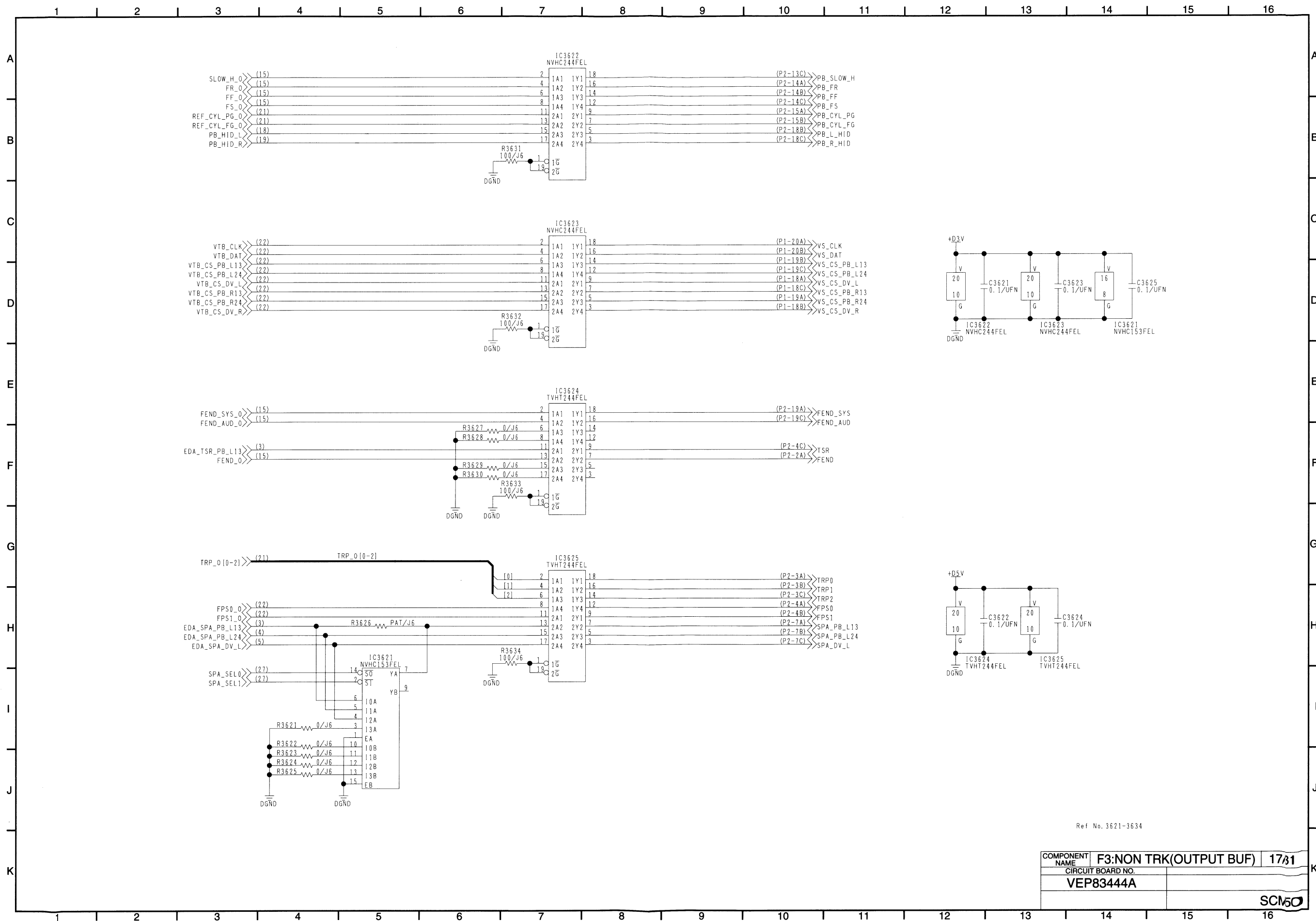
Ref No. 3501-3510

COMPONENT NAME	F3:NON TRK(FIFO CTRL DV R)	14/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM47



COMPONENT NAME	F3:NON TRK(NTRK CTRL)	15/31
CIRCUIT BOARD NO.	VEP83444A	
SCM		

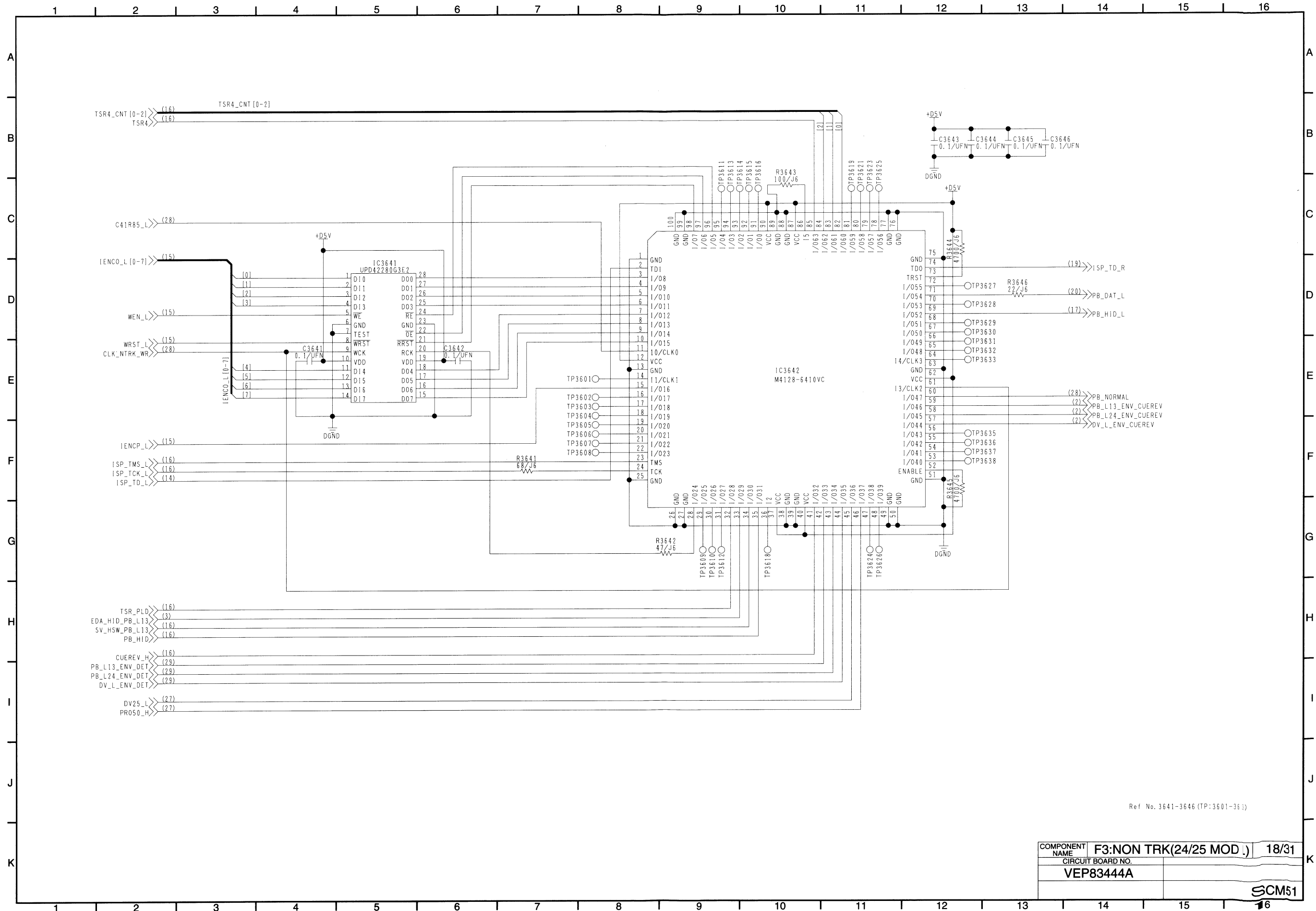
KR3V92(15/31)



Ref No. 3621-3634

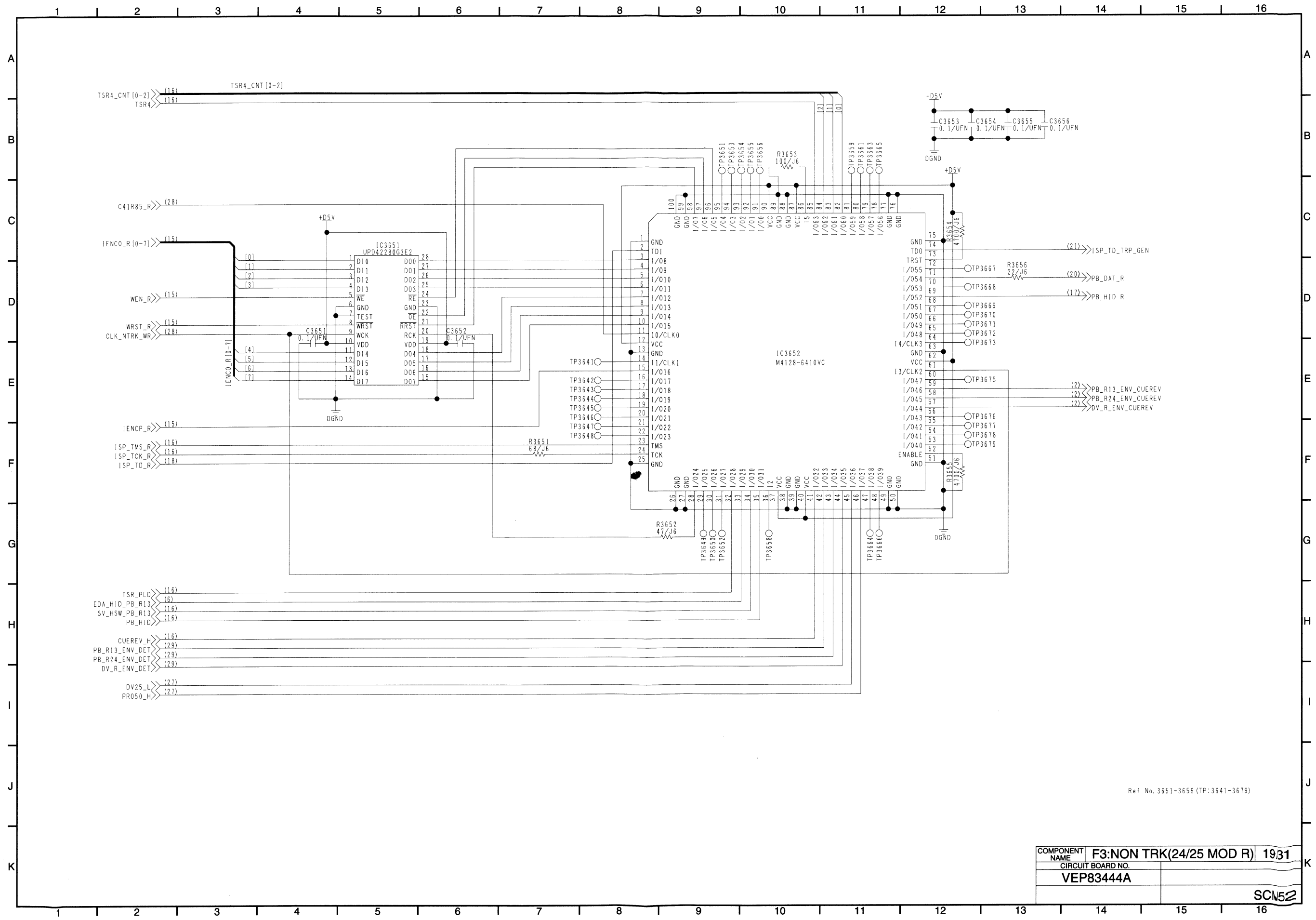
COMPONENT NAME	F3:NON TRK(OUTPUT BUF)	17/31
CIRCUIT BOARD NO.	VEP83444A	
SCM50		

KR3V92(18/31)



Ref No. 3641-3646 (TP:3601-3638)

COMPONENT NAME	F3:NON TRK(24/25 MOD.)	18/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM51

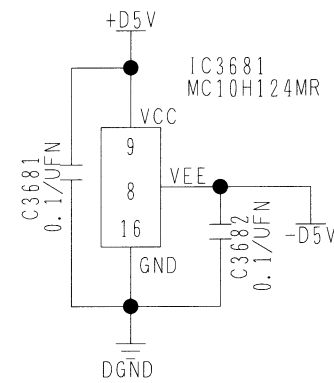
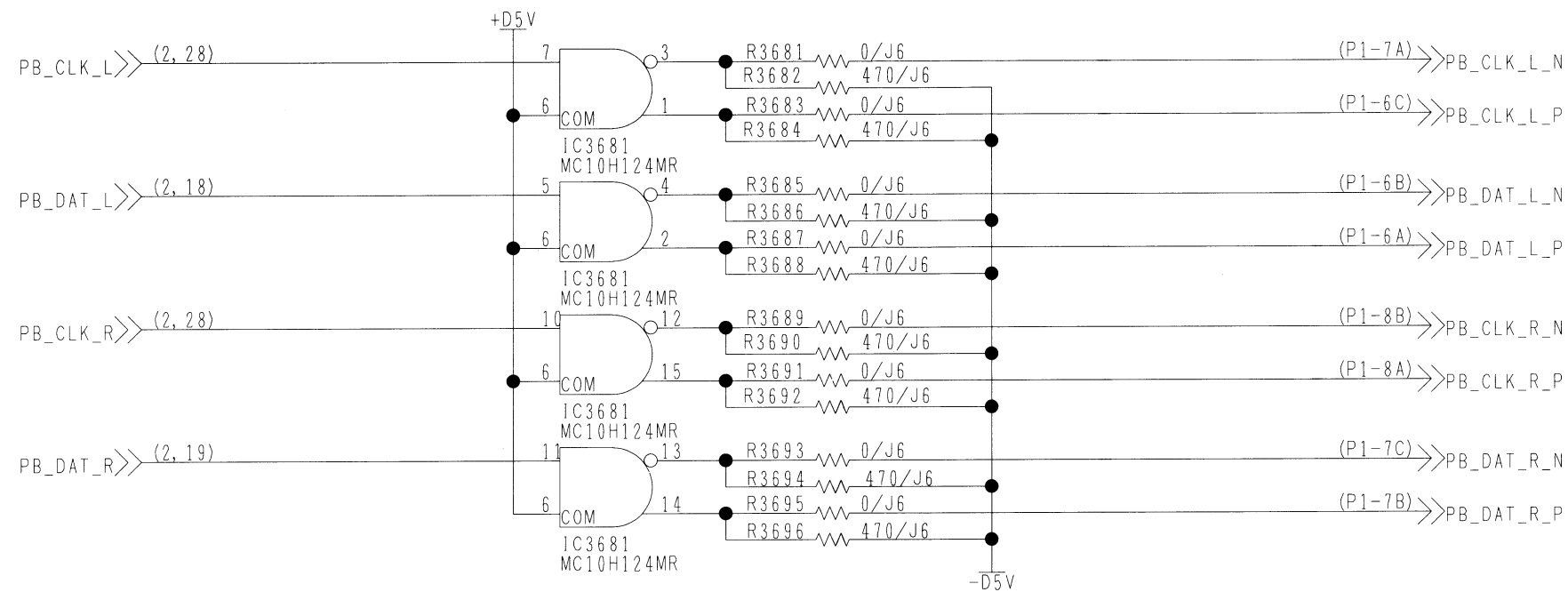


Ref No. 3651-3656 (TP:3641-3679)

COMPONENT NAME	F3:NON TRK(24/25 MOD R)	1931
CIRCUIT BOARD NO.	VEP83444A	
		SCN52

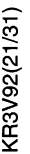
KR3V92(19/31)

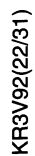
KR3V92(20/31)

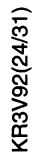


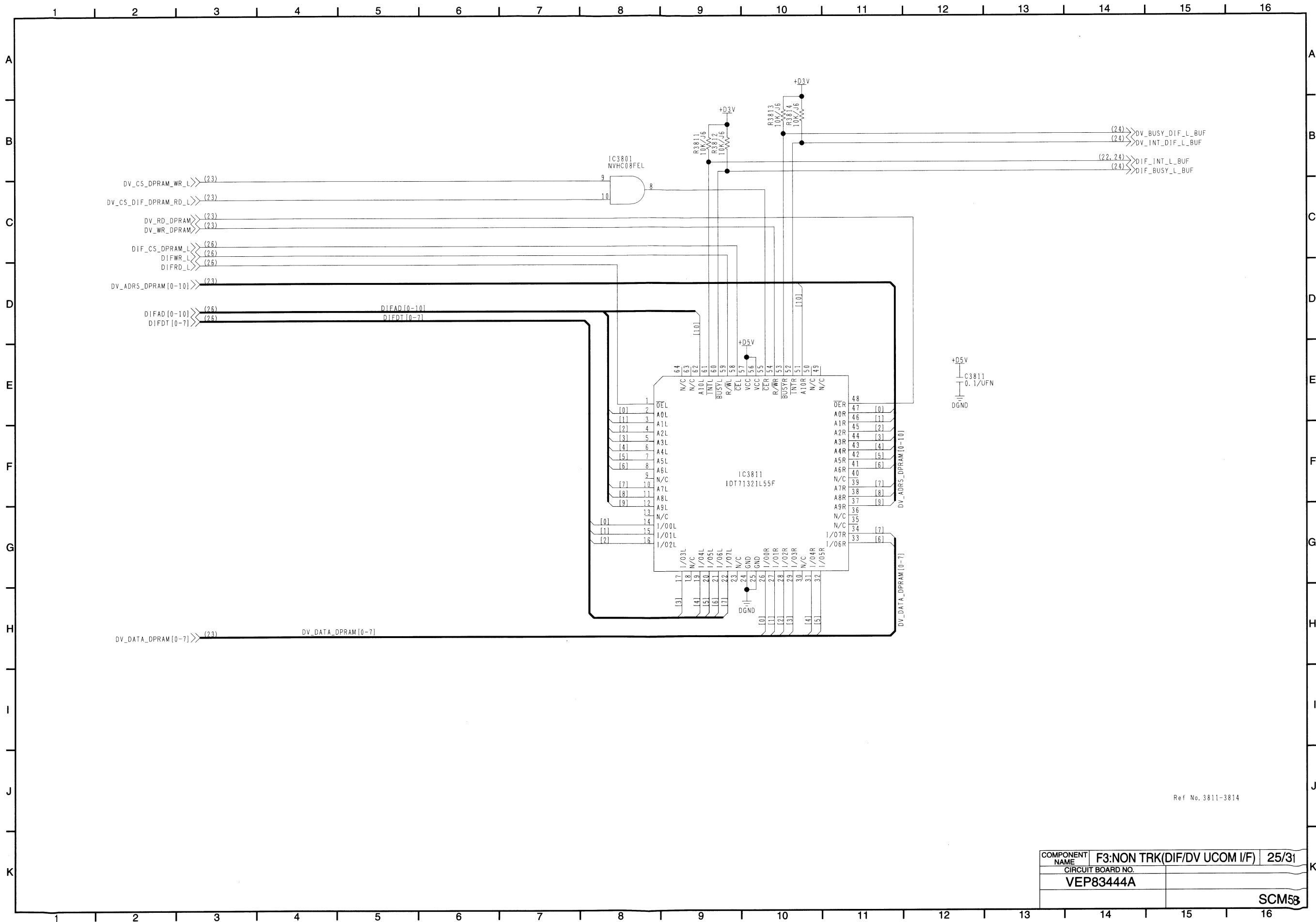
Ref No. 3681-3696

COMPONENT NAME	F3:NON TRK(ECL OUTBUF)	20/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM53







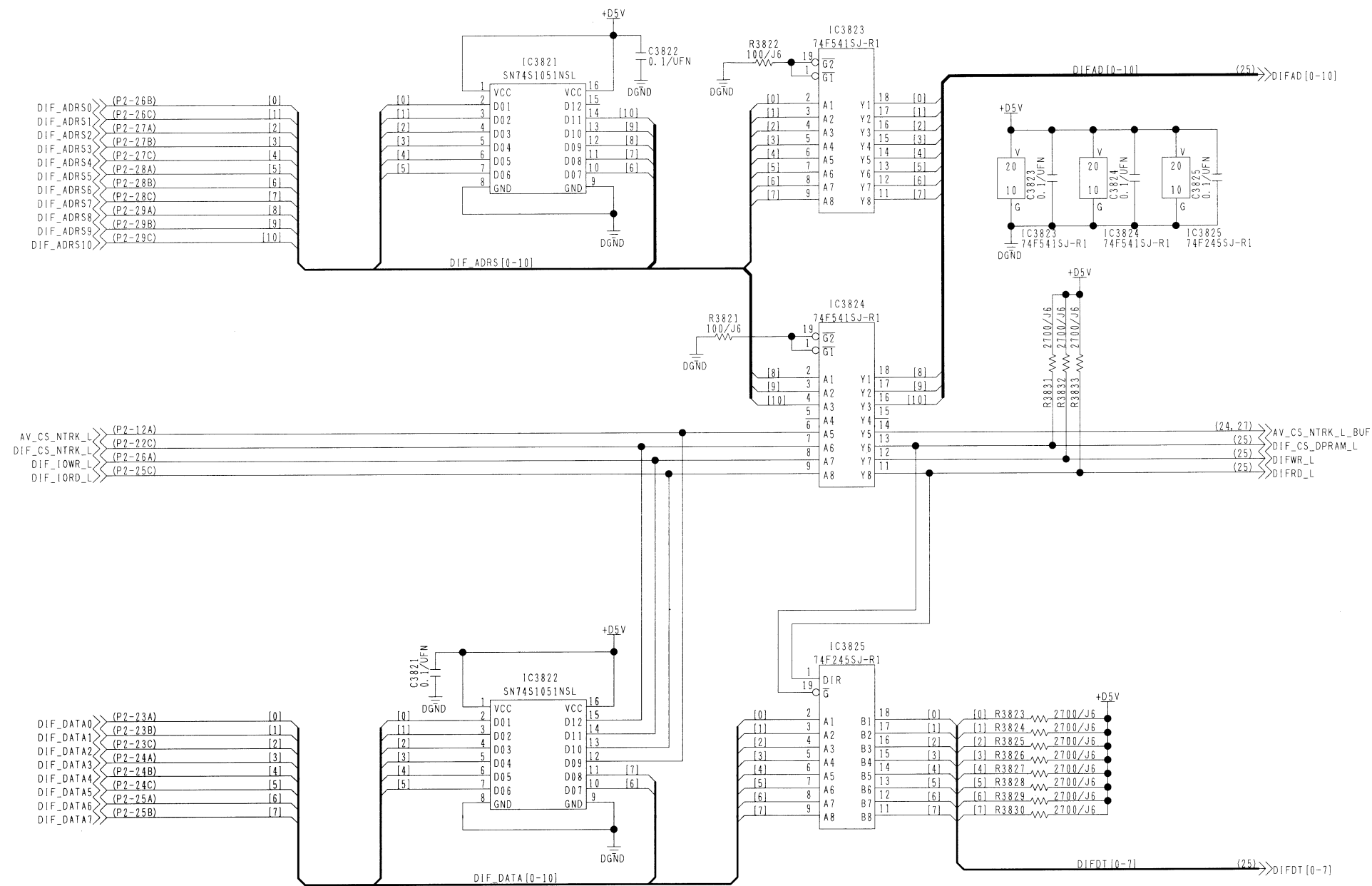


Ref No. 3811-3814

COMPONENT NAME	F3:NON TRK(DIF/DV UCOM I/F)	25/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM58

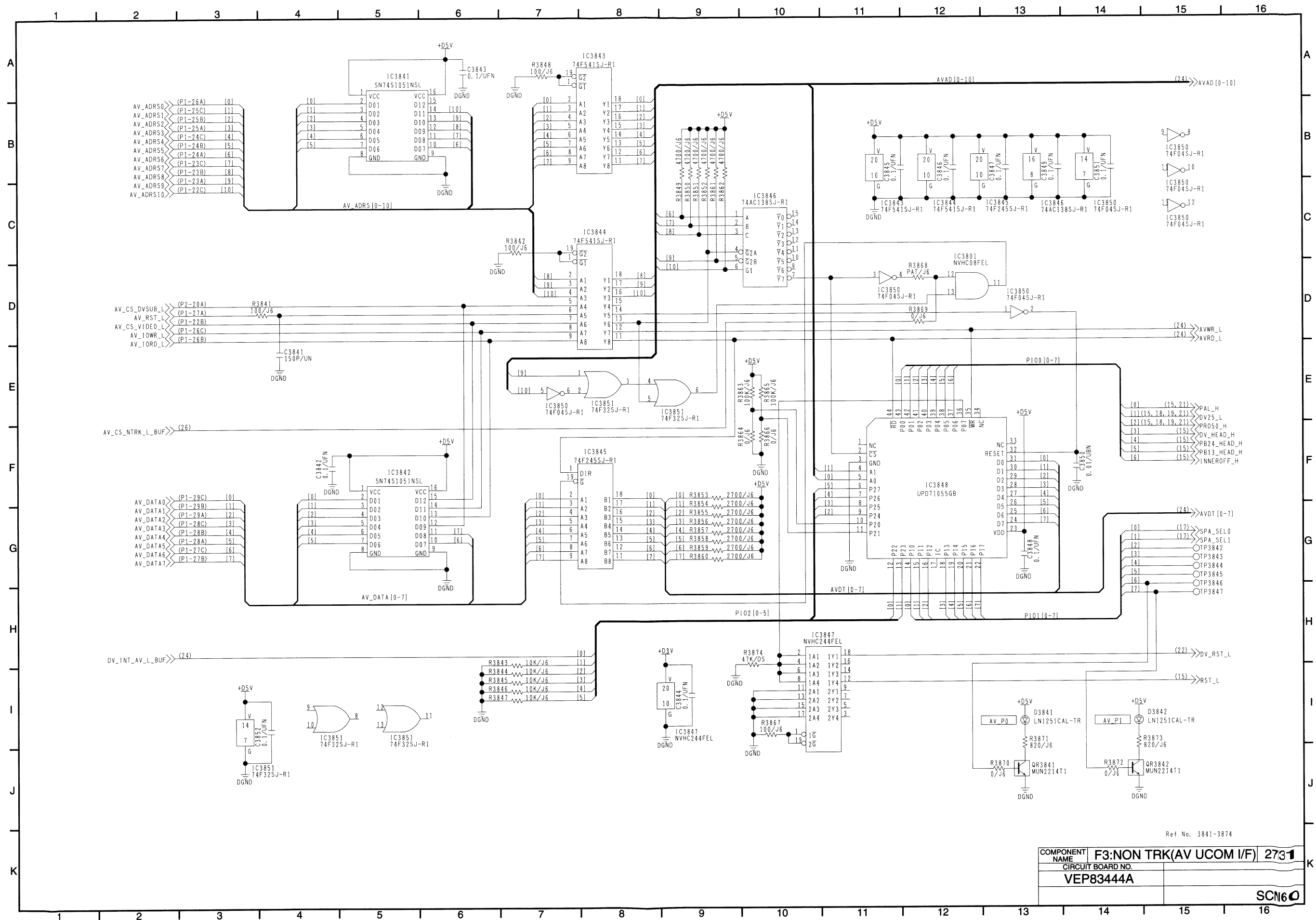
KF3V92(25/31)

KR3V92(26/31)



Ref No. 3821-3833

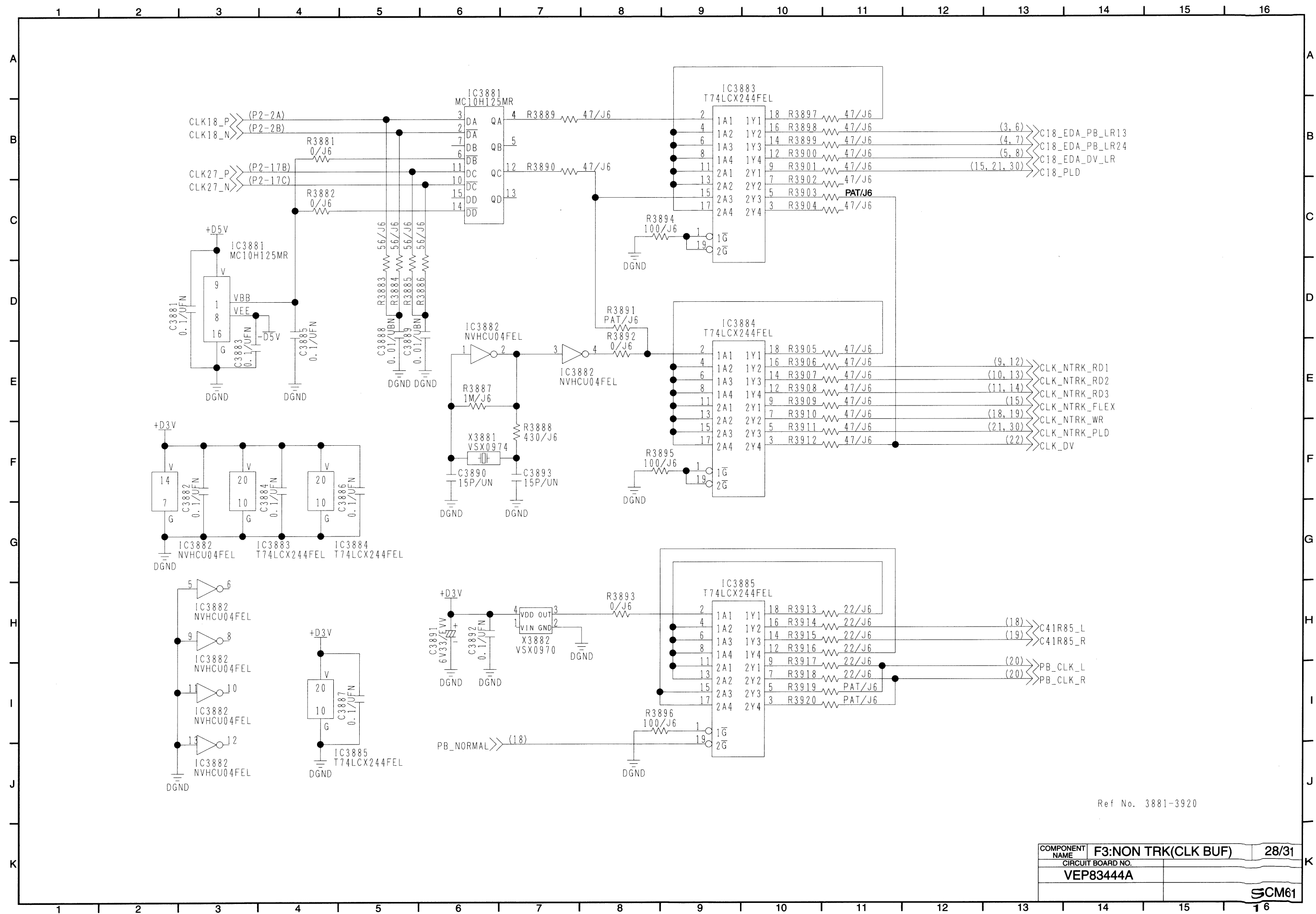
COMPONENT NAME	F3:NON TRK(DIF UCOM I/F)	26/31
CIRCUIT BOARD NO.	VEP83444A	
SCM59		



COMPONENT NAME	F3:NON TRK(AV UCOM I/F)	2731
CIRCUIT BOARD NO.	VEP83444A	
SCN6		

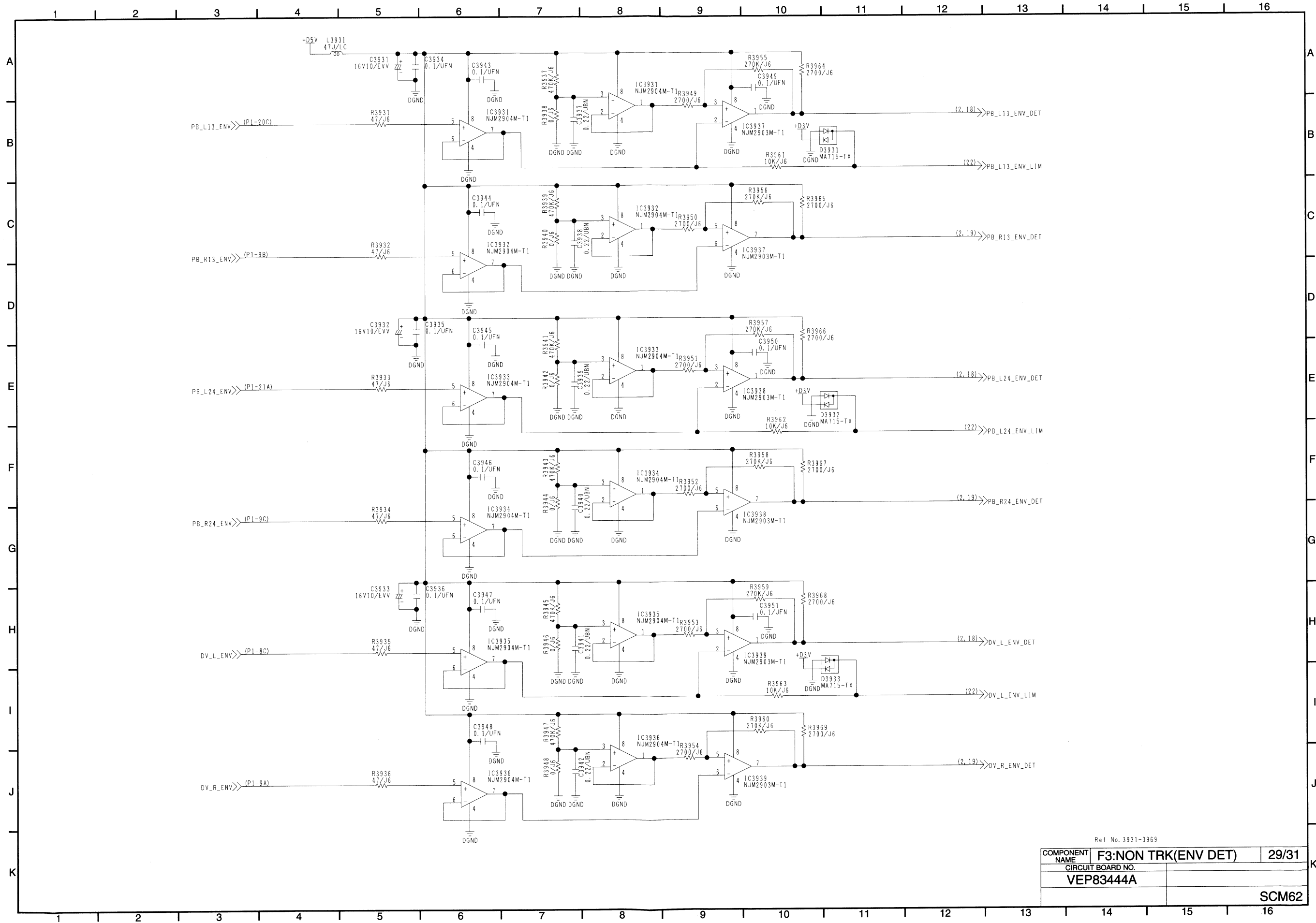
KR3V92(27/31)

KF3V92(28/31)



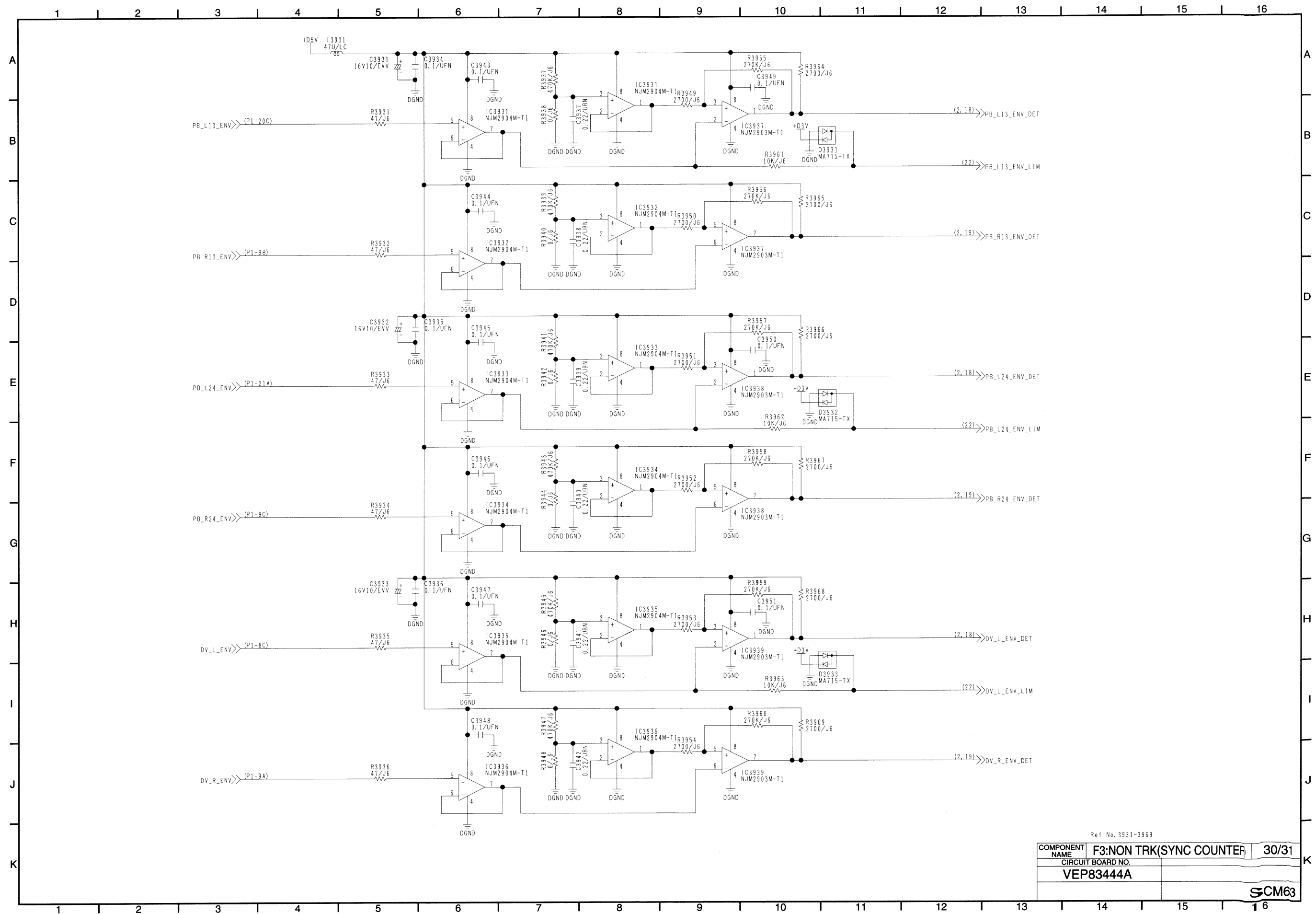
Ref No. 3881-3920

COMPONENT NAME	F3:NON TRK(CLK BUF)	28/31
CIRCUIT BOARD NO.	VEP83444A	
SCM61		



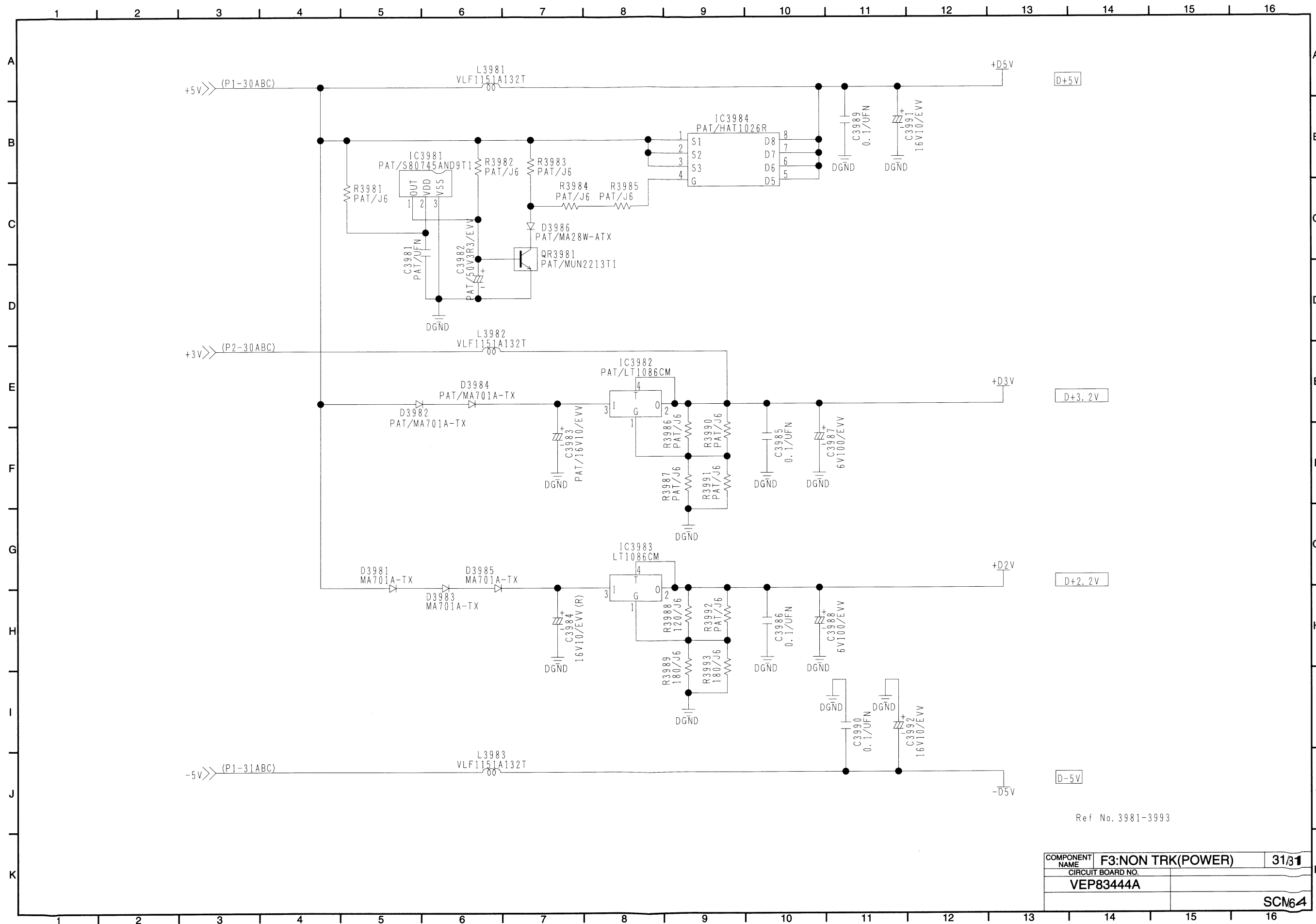
Ref No. 3931-3969		
COMPONENT NAME	F3:NON TRK(ENV DET)	29/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM62

KR3V92(30/31)

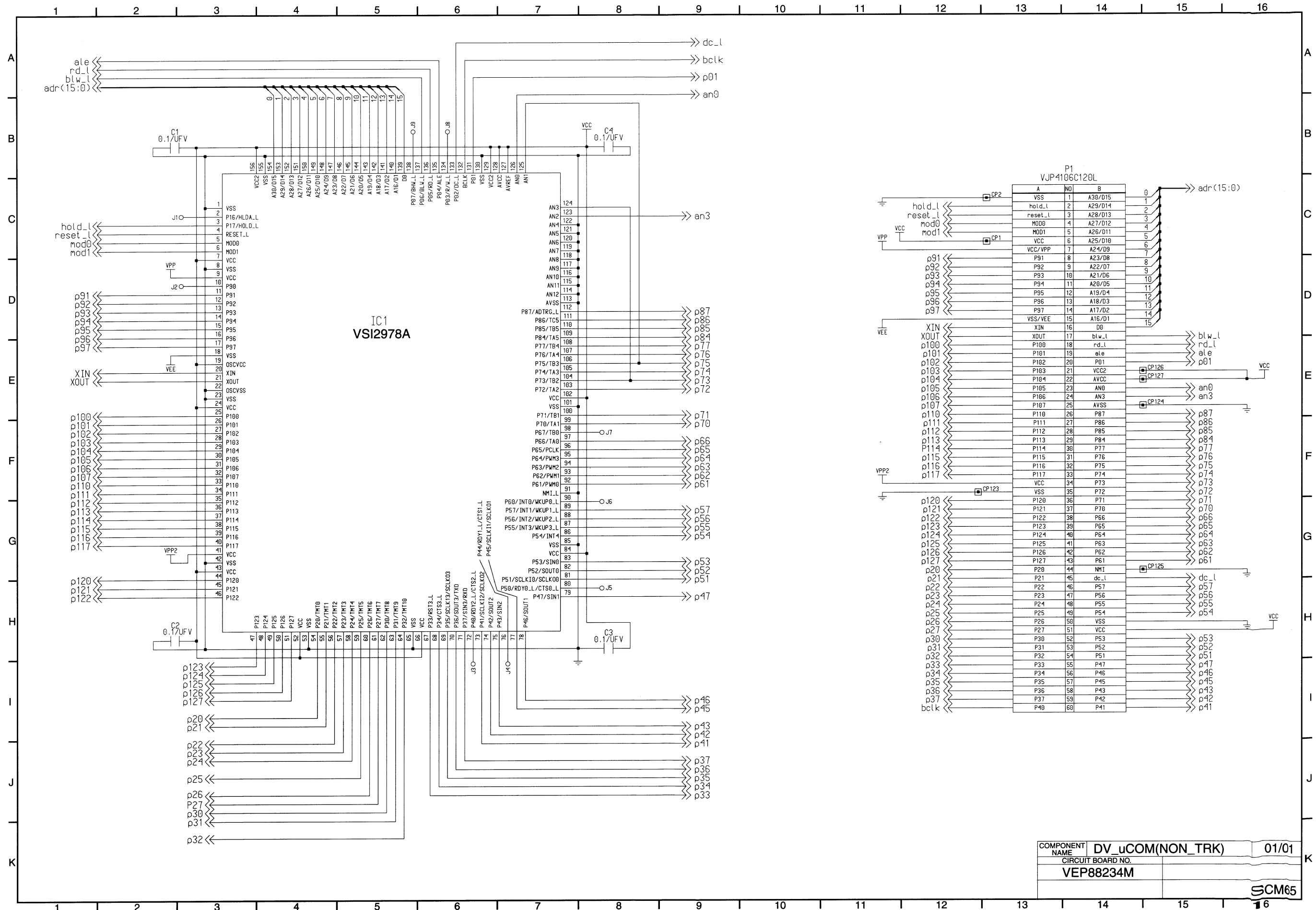


Ref No. 3931-3969

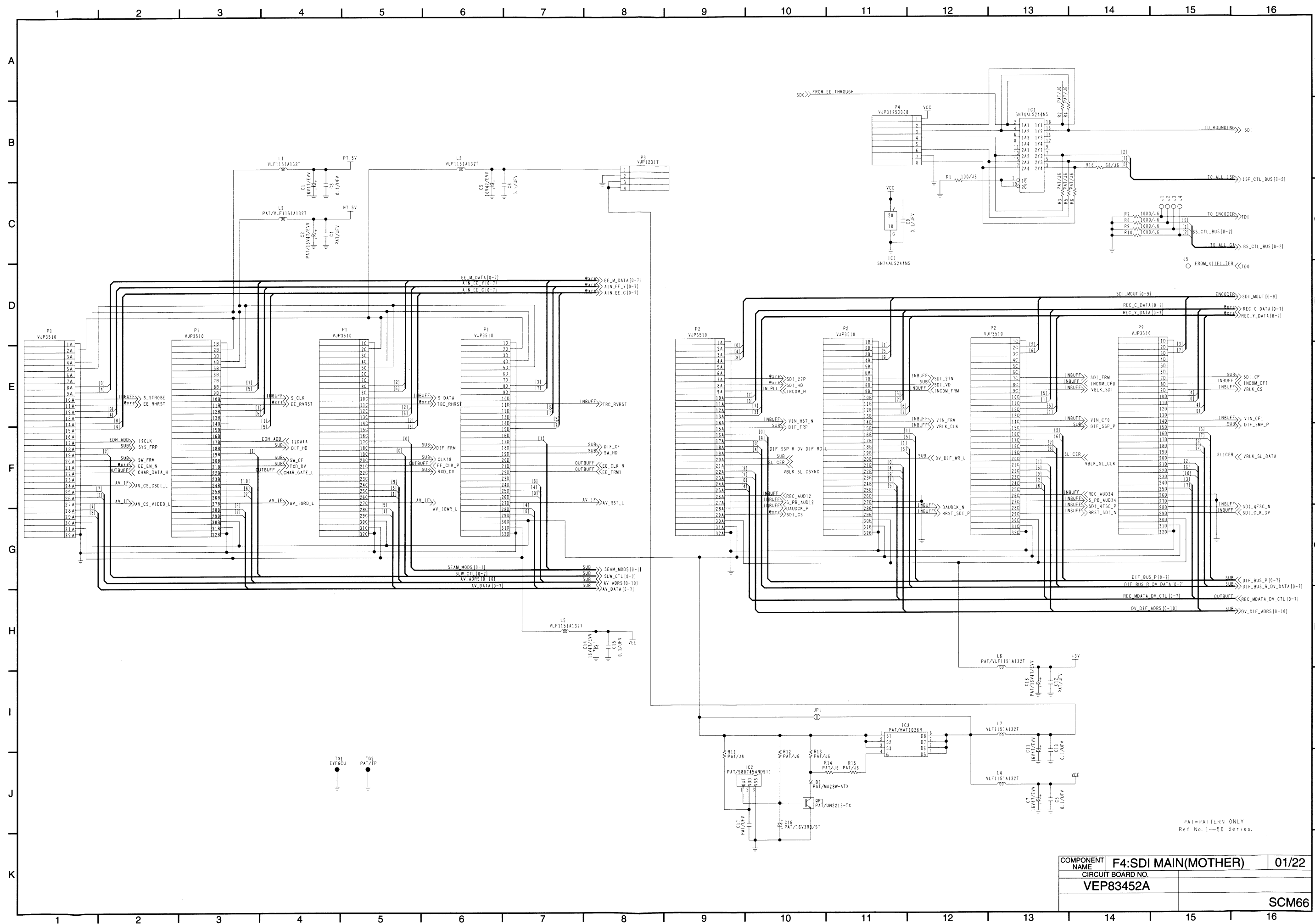
COMPONENT NAME	F3:NON TRK(SYNC COUNTER)	30/31
CIRCUIT BOARD NO.	VEP83444A	
		SCM63

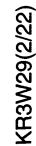


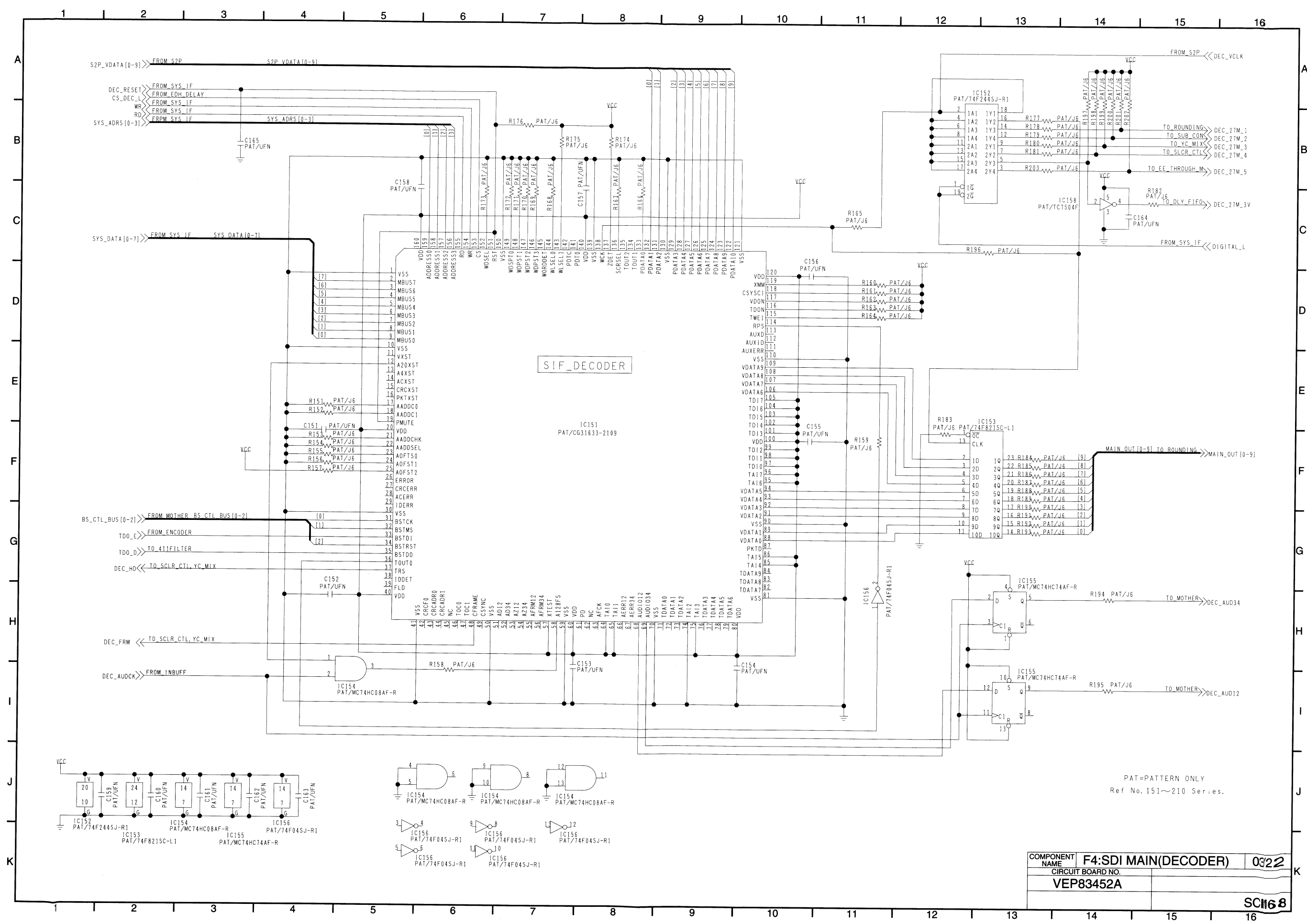
KR8717(1/1)



COMPONENT NAME	DV_uCOM(NON_TRK)	01/01
CIRCUIT BOARD NO.	VEP88234M	
SCM65		





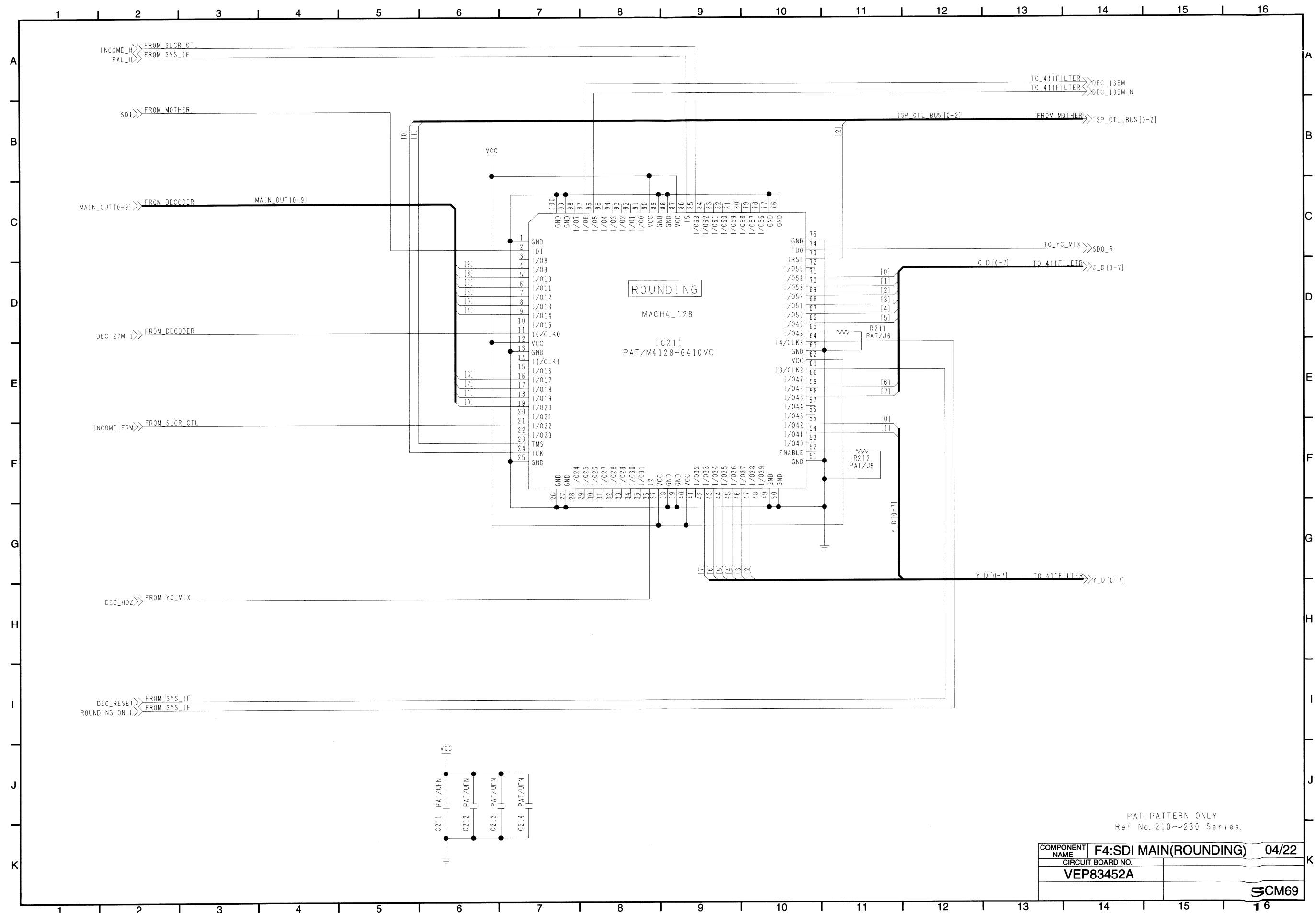


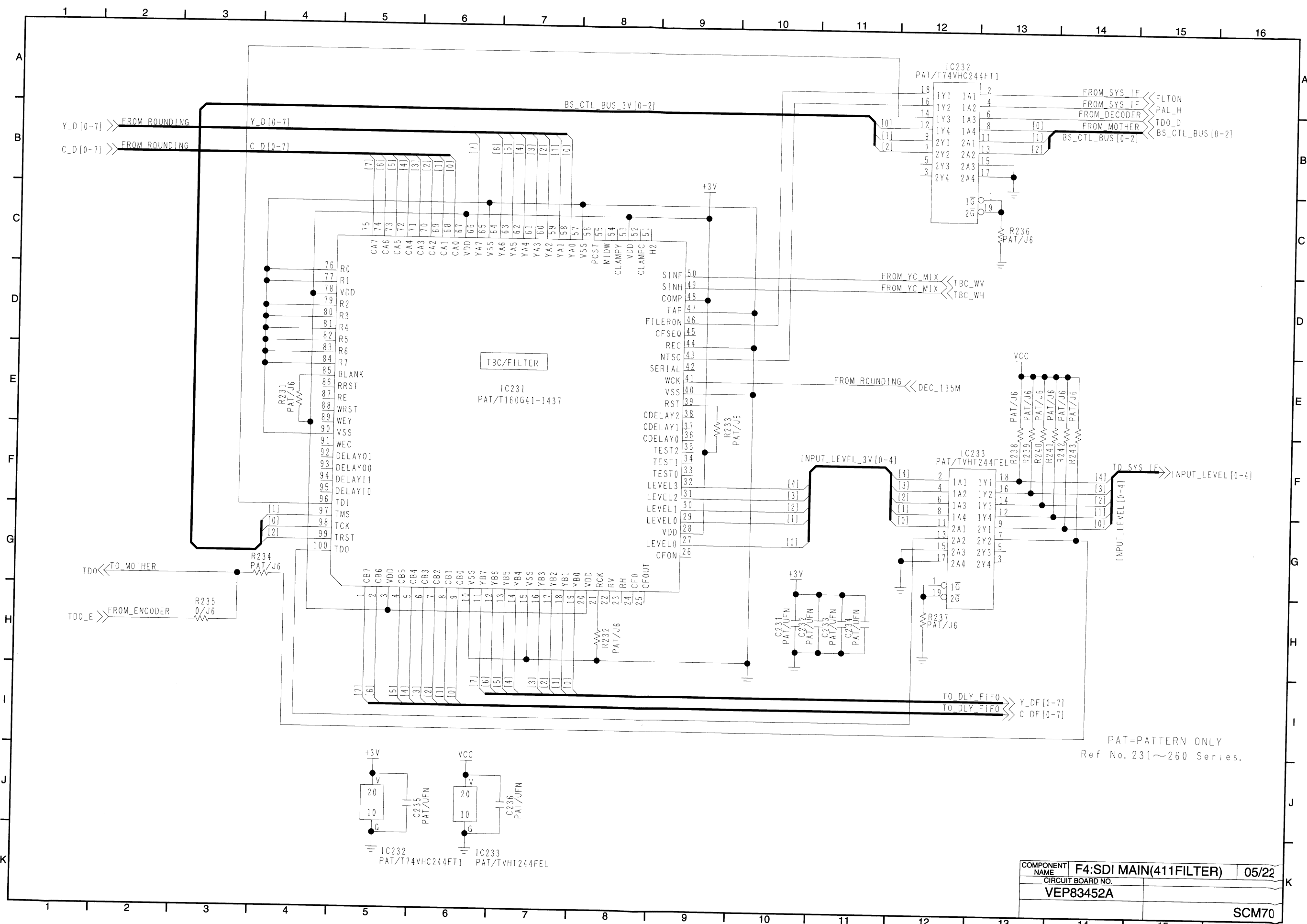
PAT=PATTERN ONLY
Ref No.151~210 Series.

COMPONENT NAME	F4:SDI MAIN(DECODER)	0322
CIRCUIT BOARD NO.	VEP83452A	
SCHEMATIC NO.	SCM68	

KF3W29(3/22)

KR3W29(4/22)



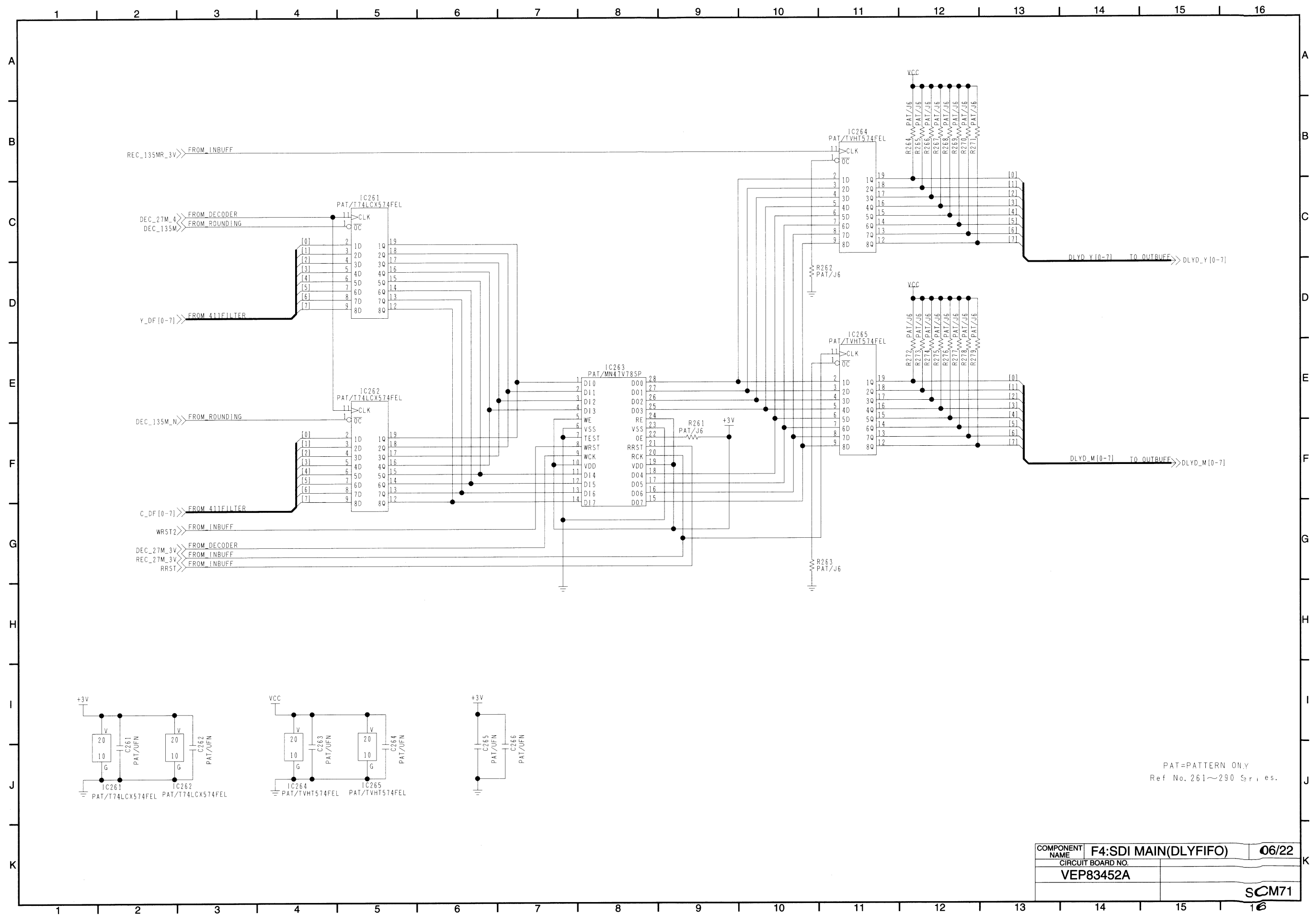


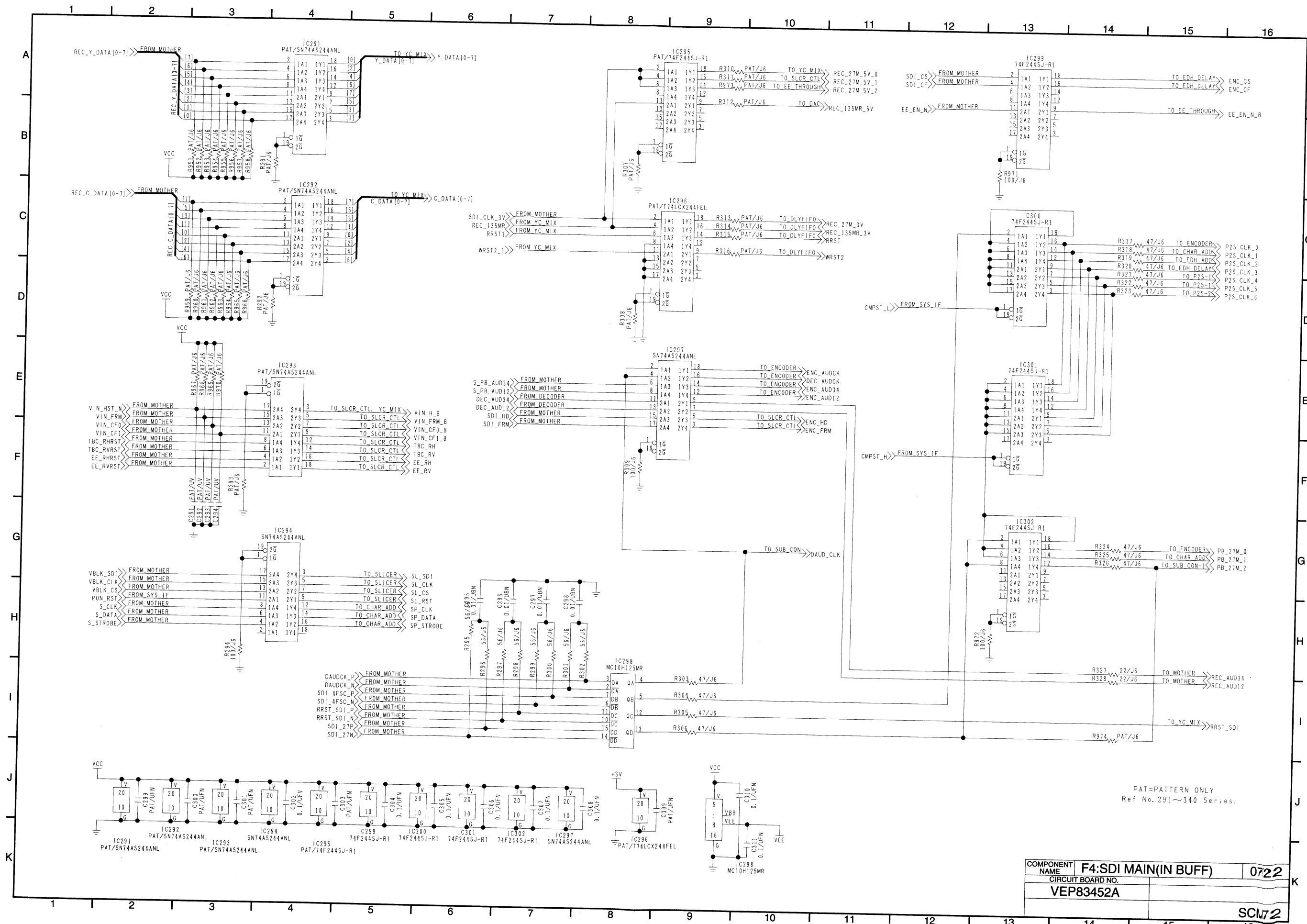
PAT=PATTERN ONLY
Ref No. 231~260 Series.

COMPONENT NAME	F4:SDI MAIN(411)FILTER)	05/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM70

KR3W29(5/22)

KR3W29(6/22)

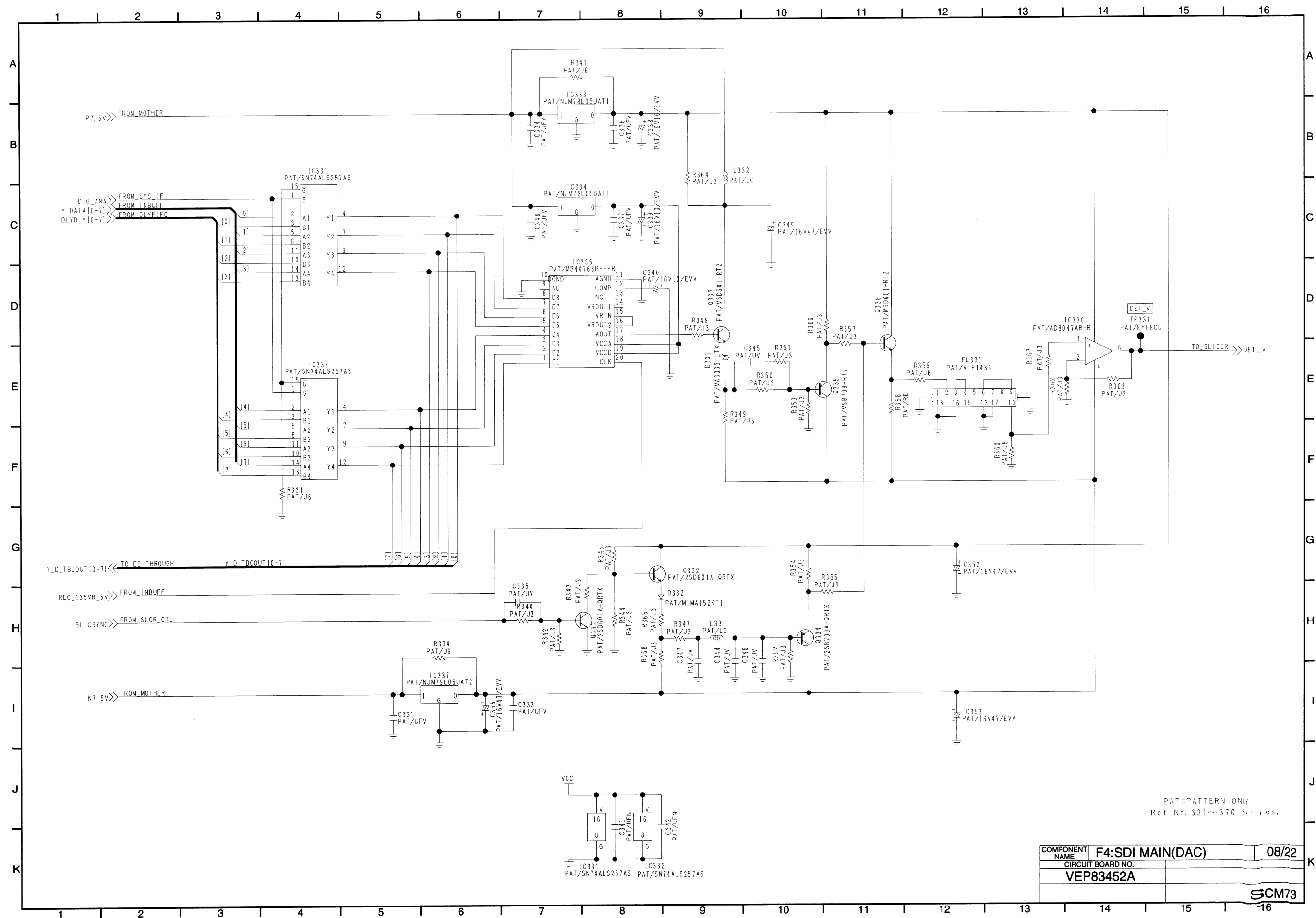




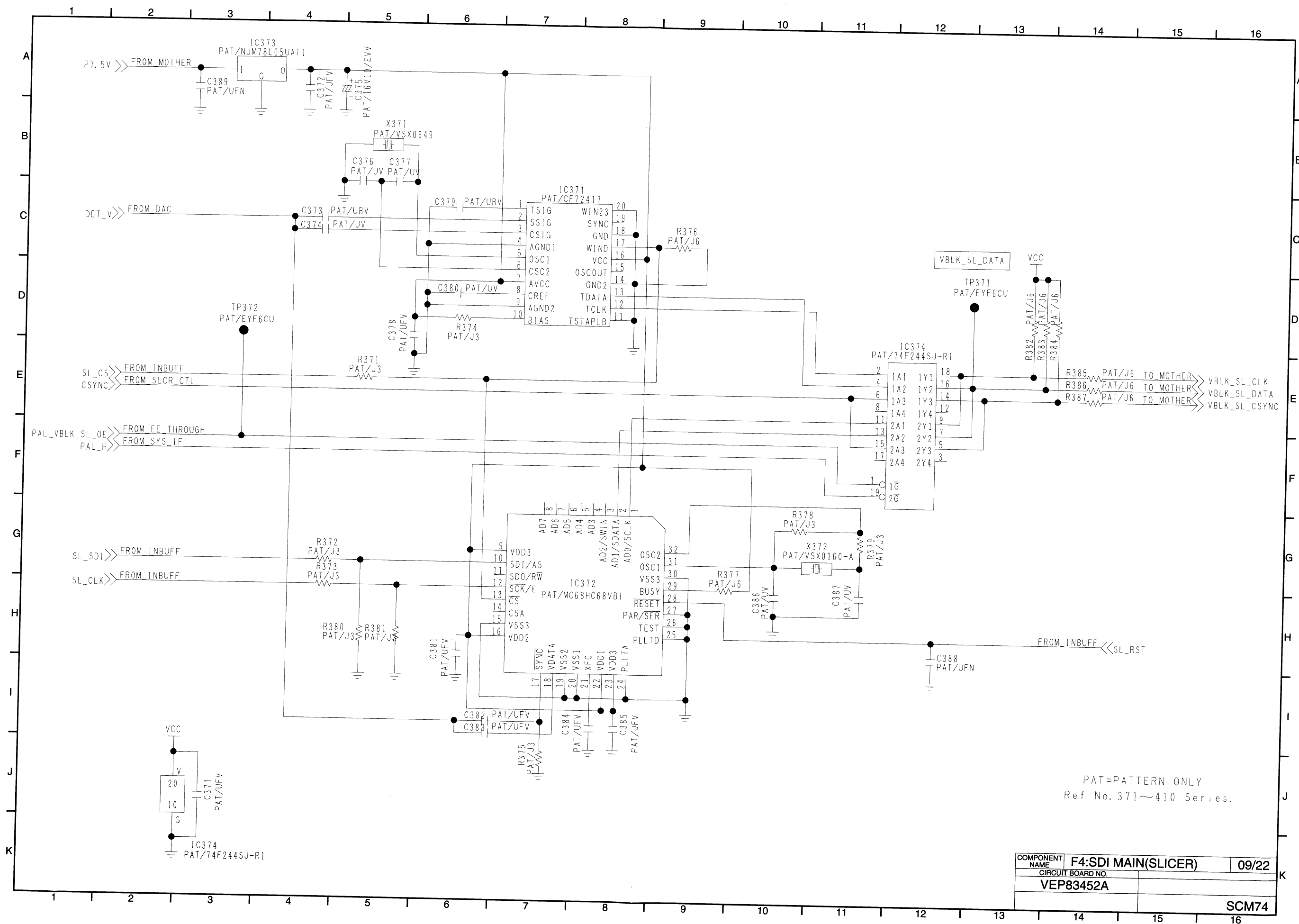
COMPONENT NAME	F4:SDI MAIN(IN BUFF)	0722
CIRCUIT BOARD NO.	VEP83452A	
SCN	SCN72	

KR3W29(7/22)

KF3W29(8/22)



COMPONENT NAME	F4:SDI MAIN(DAC)	08/22
CIRCUIT BOARD NO.	VEP83452A	
SCM73		

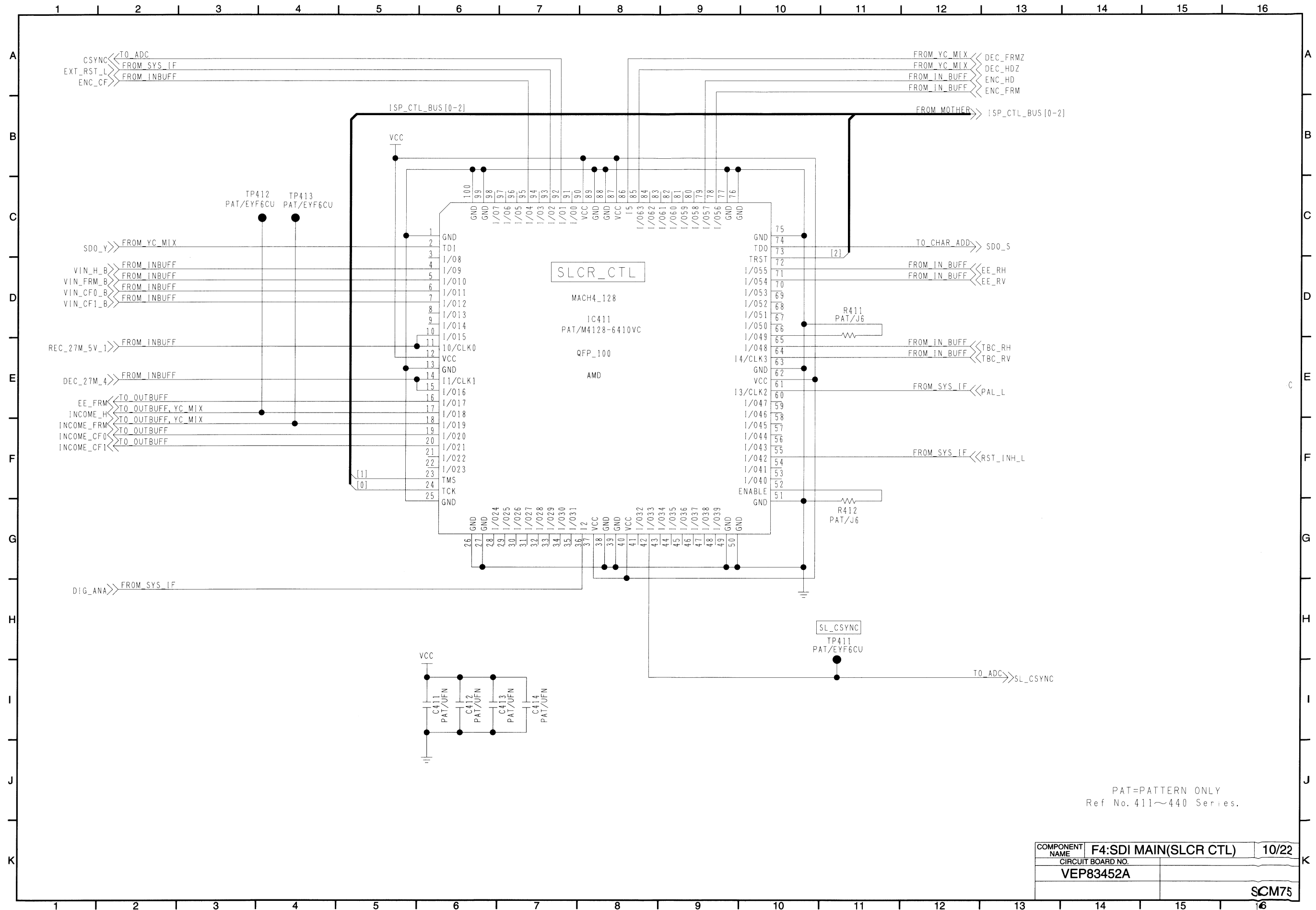


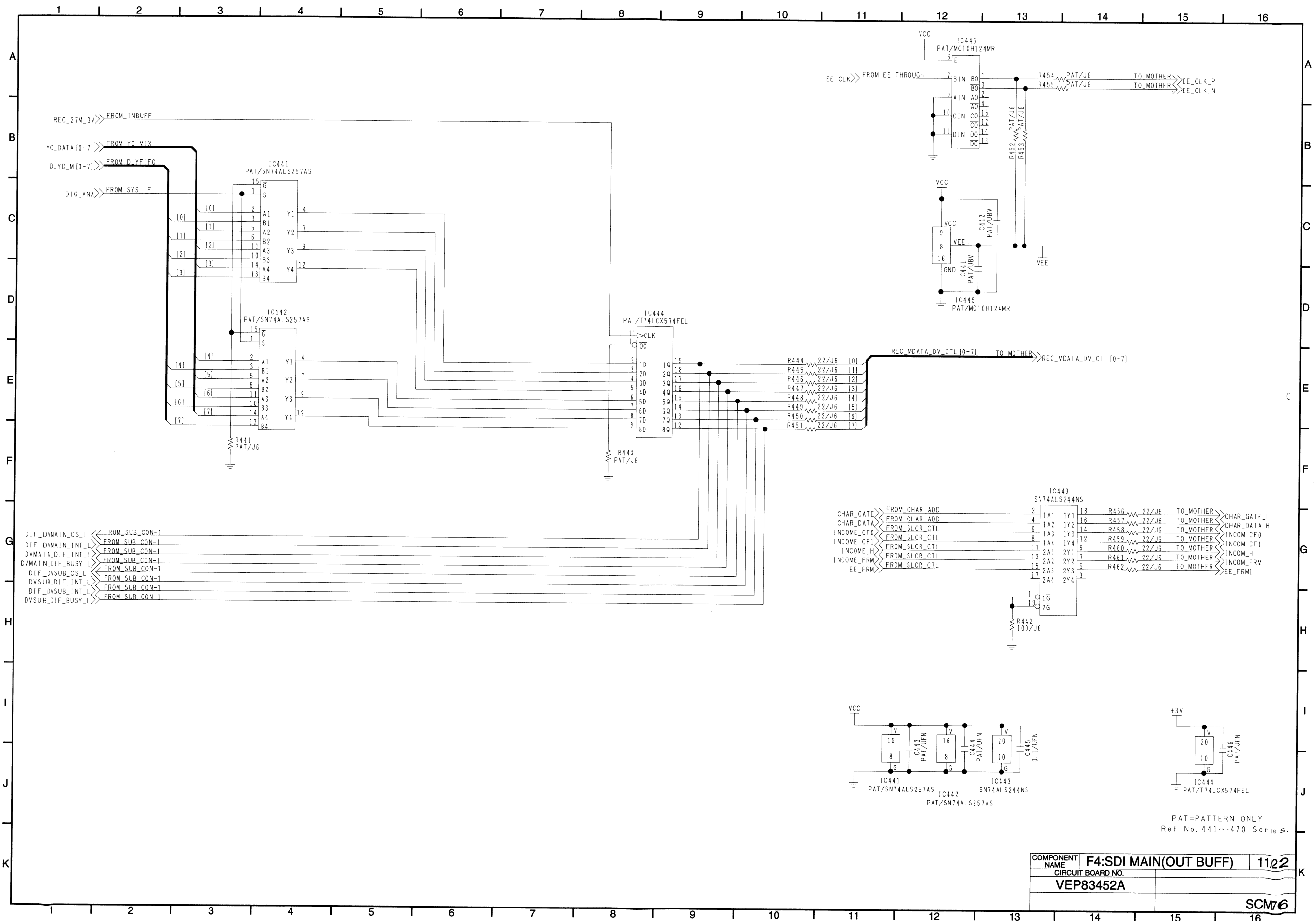
PAT=PATTERN ONLY
Ref No. 371~410 Series.

COMPONENT NAME	F4:SDI MAIN(SLICER)	09/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM74

KR3W29(9/22)

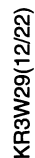
KR3W29(10/22)



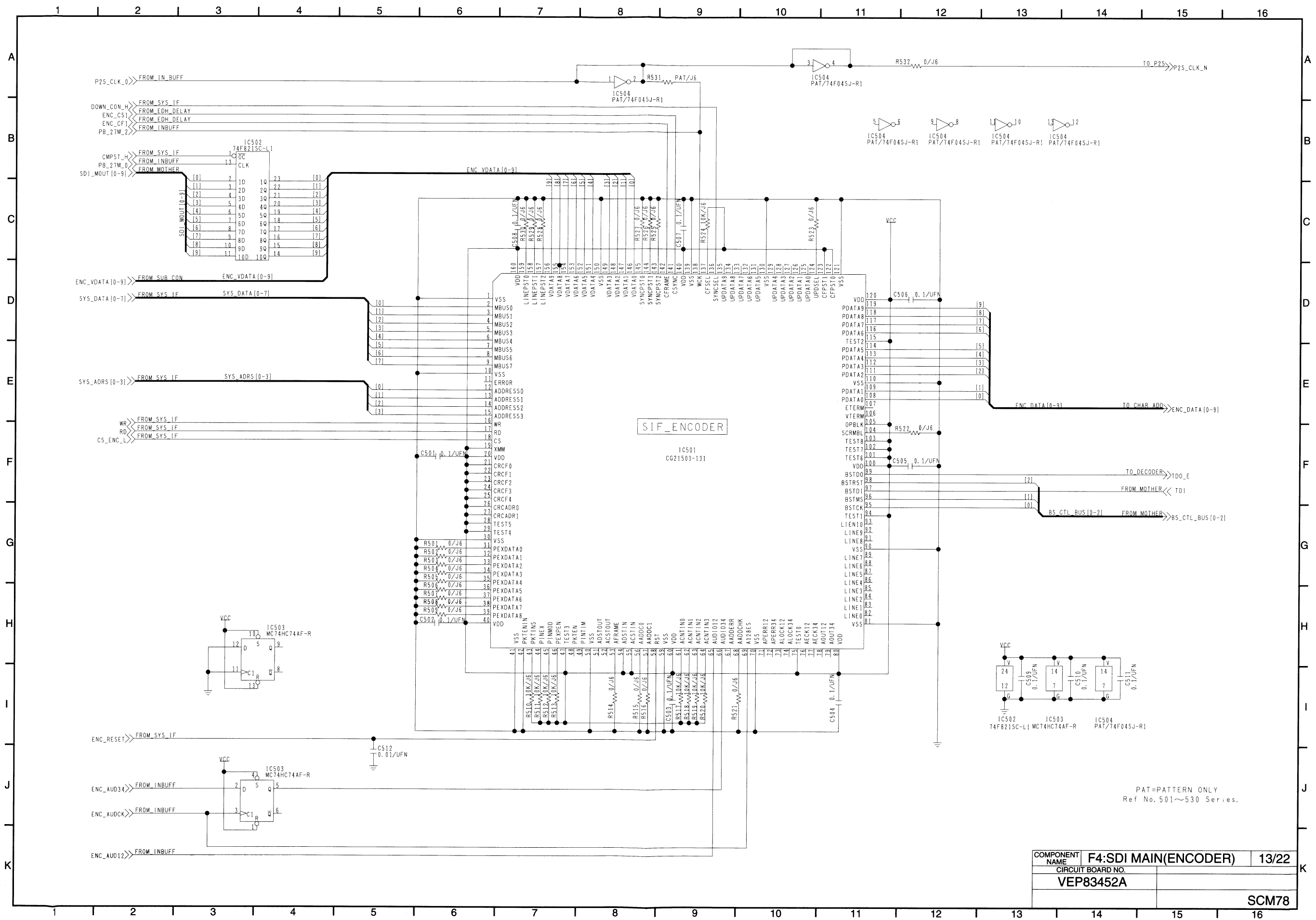


PAT=PATTERN ONLY
Ref No. 441~470 Series.

COMPONENT NAME	F4:SDI MAIN(OUT BUFF)	1122
CIRCUIT BOARD NO.	VEP83452A	
SCM76		

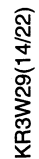


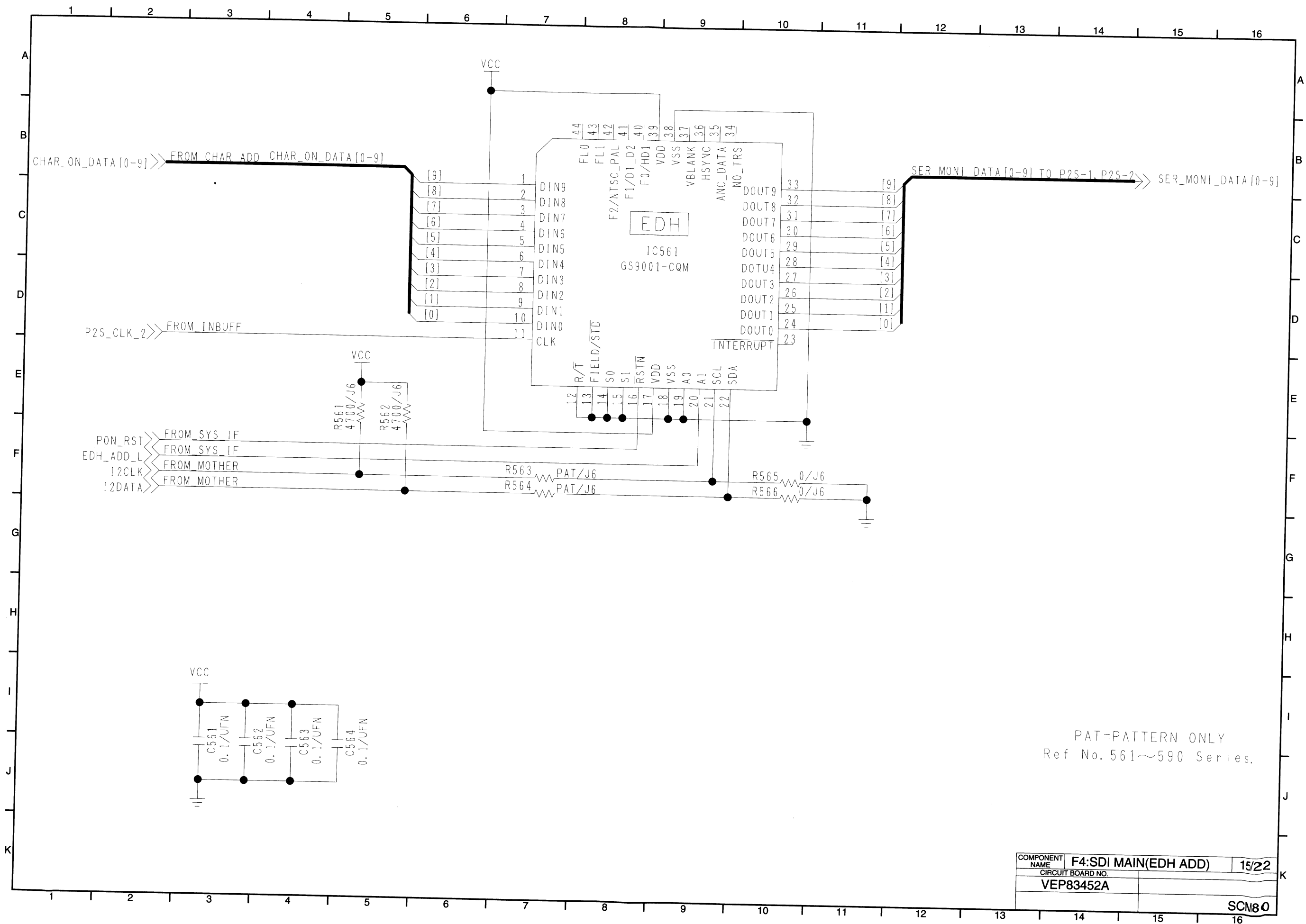
COMPONENT NAME	F4:SDI MAIN(YC MIX)	12/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM77



PAT=PATTERN ONLY
Ref No. 501~530 Series.

COMPONENT NAME	F4:SDI MAIN(ENCODER)	13/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM78

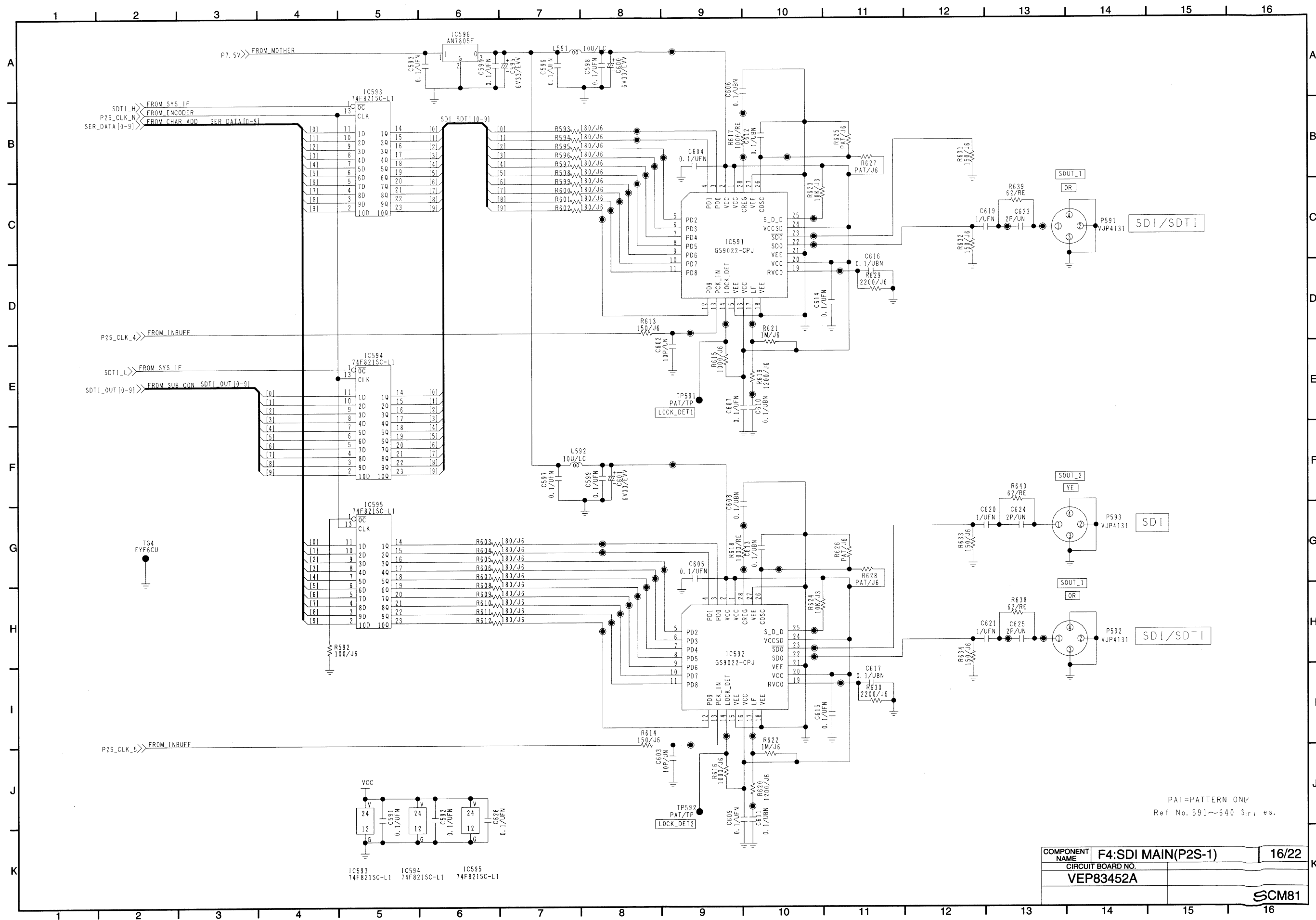




PAT=PATTERN ONLY
Ref No. 561~590 Series.

COMPONENT NAME	F4:SDI MAIN(EDH ADD)	15/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM80

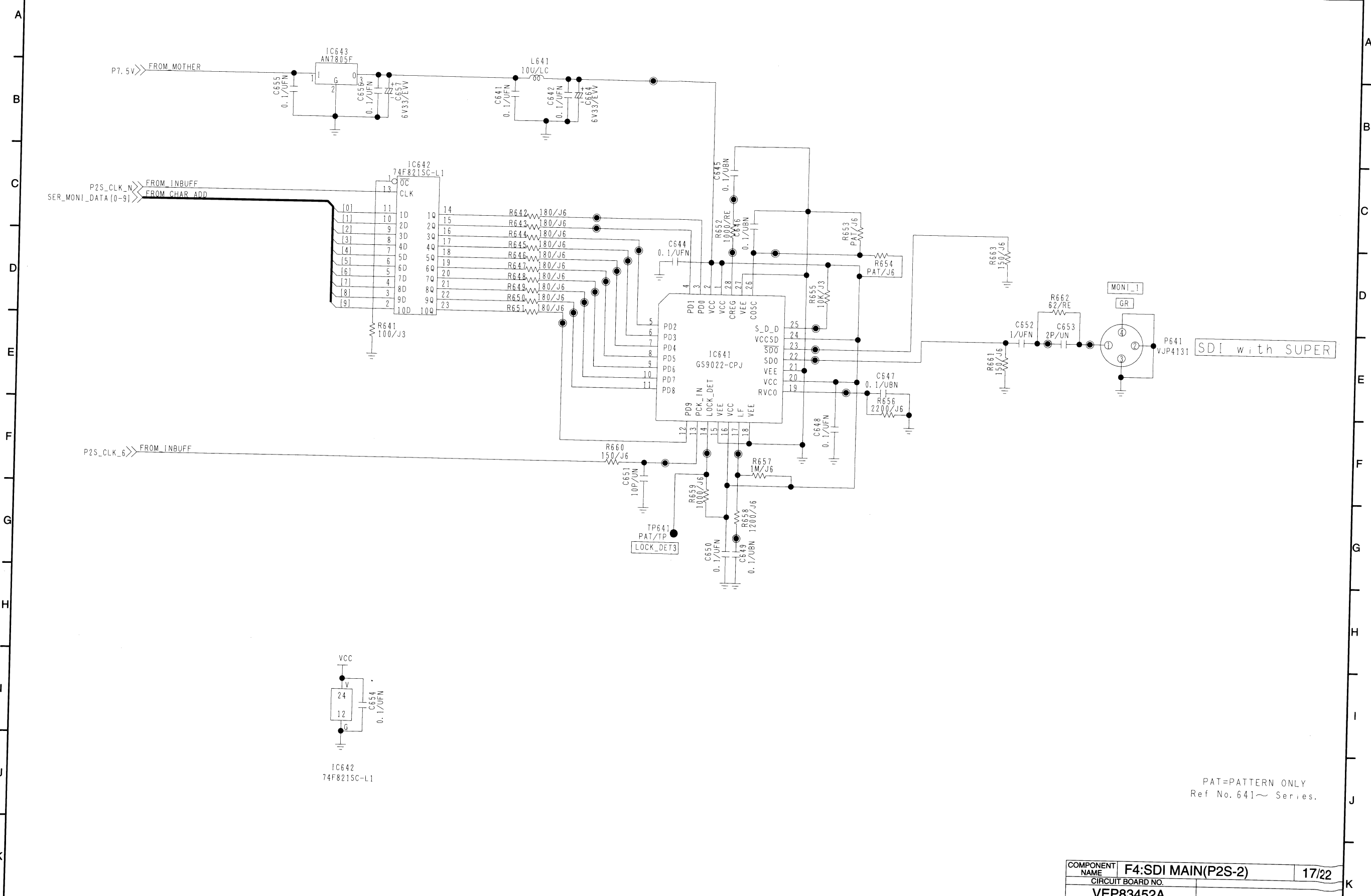
KR3W29(16/22)



PAT=PATTERN ONLY
Ref No. 591~640 S.r. es.

COMPONENT NAME	F4:SDI MAIN(P2S-1)	16/22
CIRCUIT BOARD NO.	VEP83452A	
SCM81		

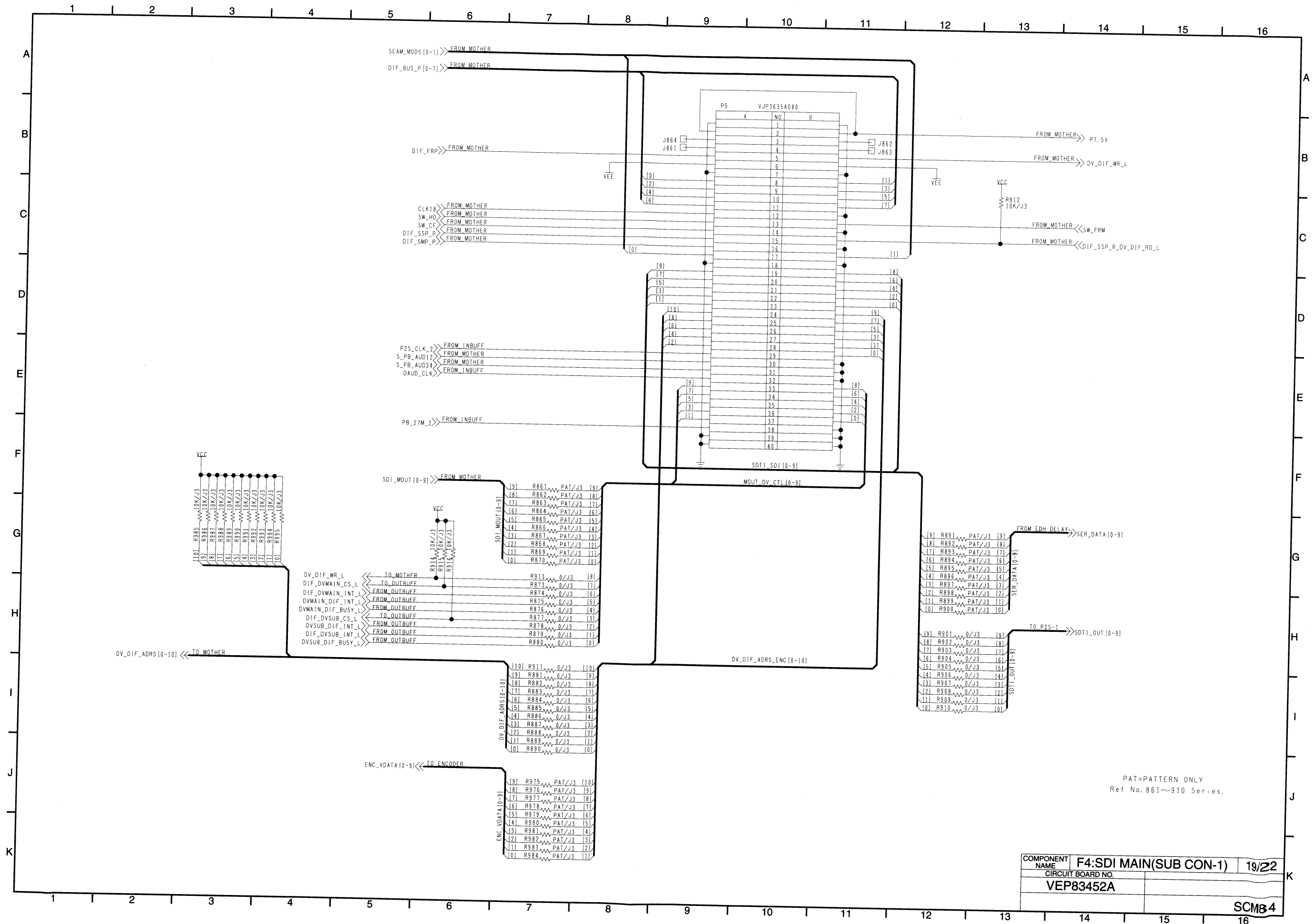
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



PAT=PATTERN ONLY
Ref No. 641 ~ Series.

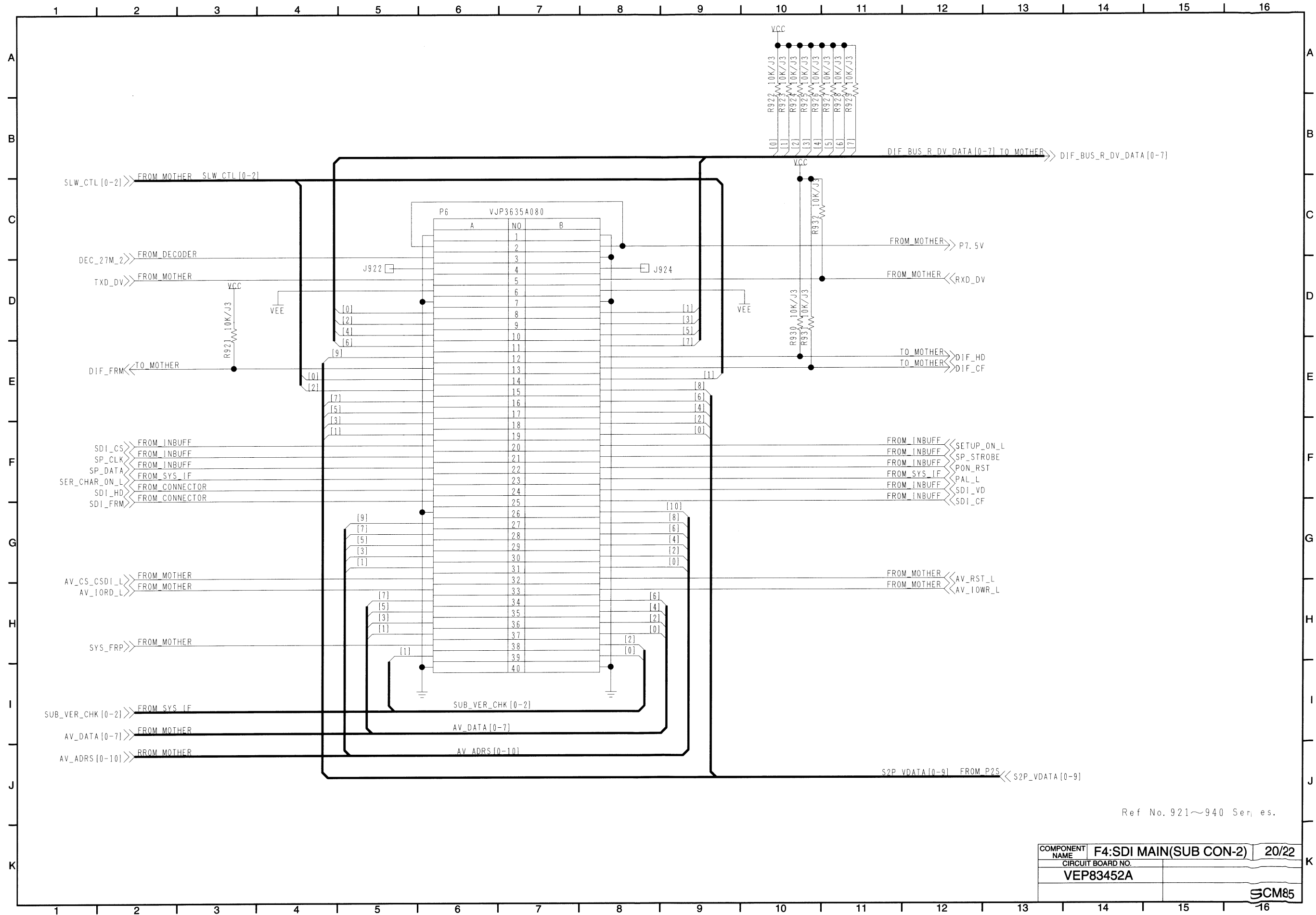
COMPONENT NAME	F4:SDI MAIN(P2S-2)	17/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM82





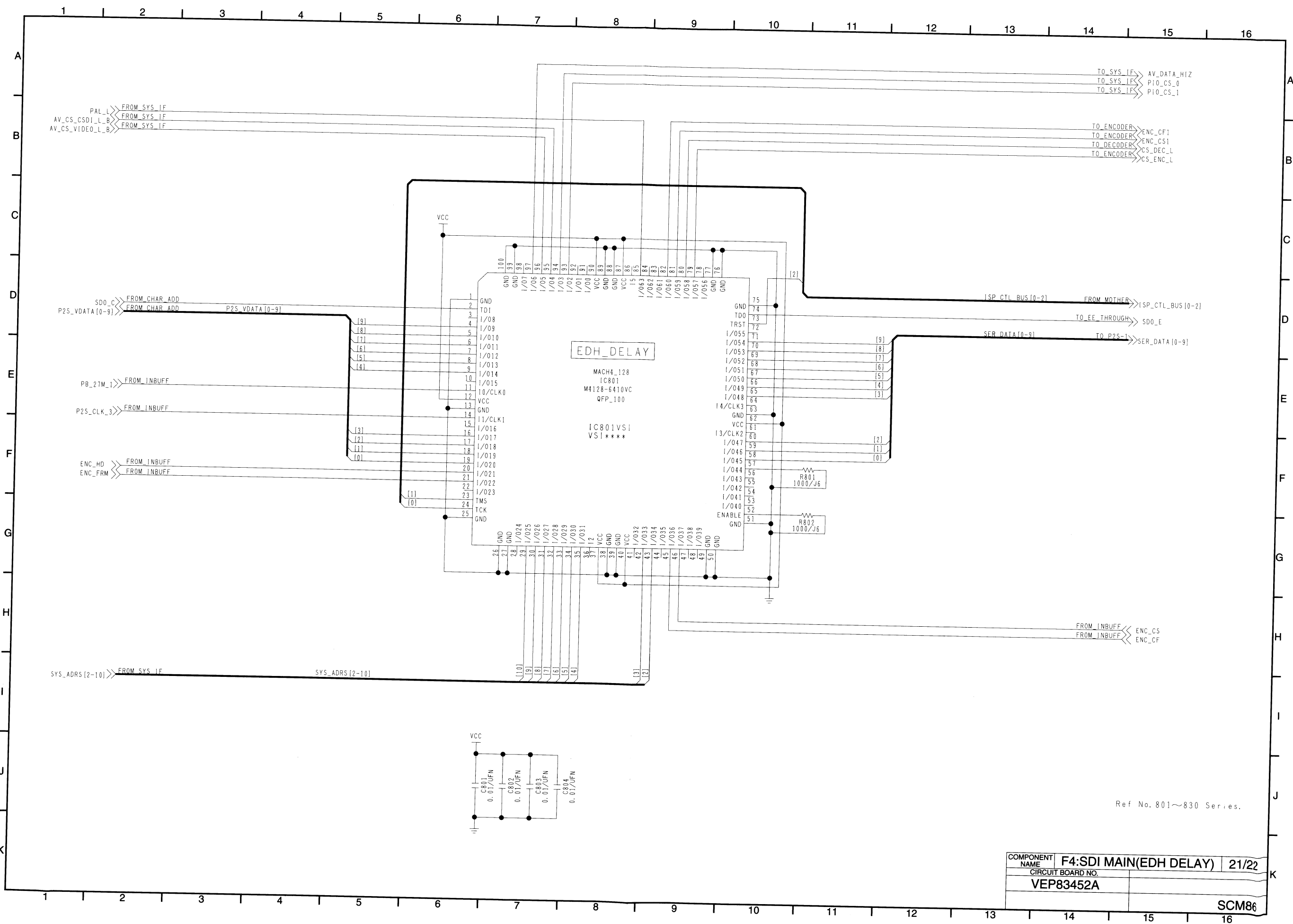
PAT=PATTERN ONLY
Ref No. 861~910 Series.

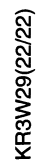
KR3W29(20/22)

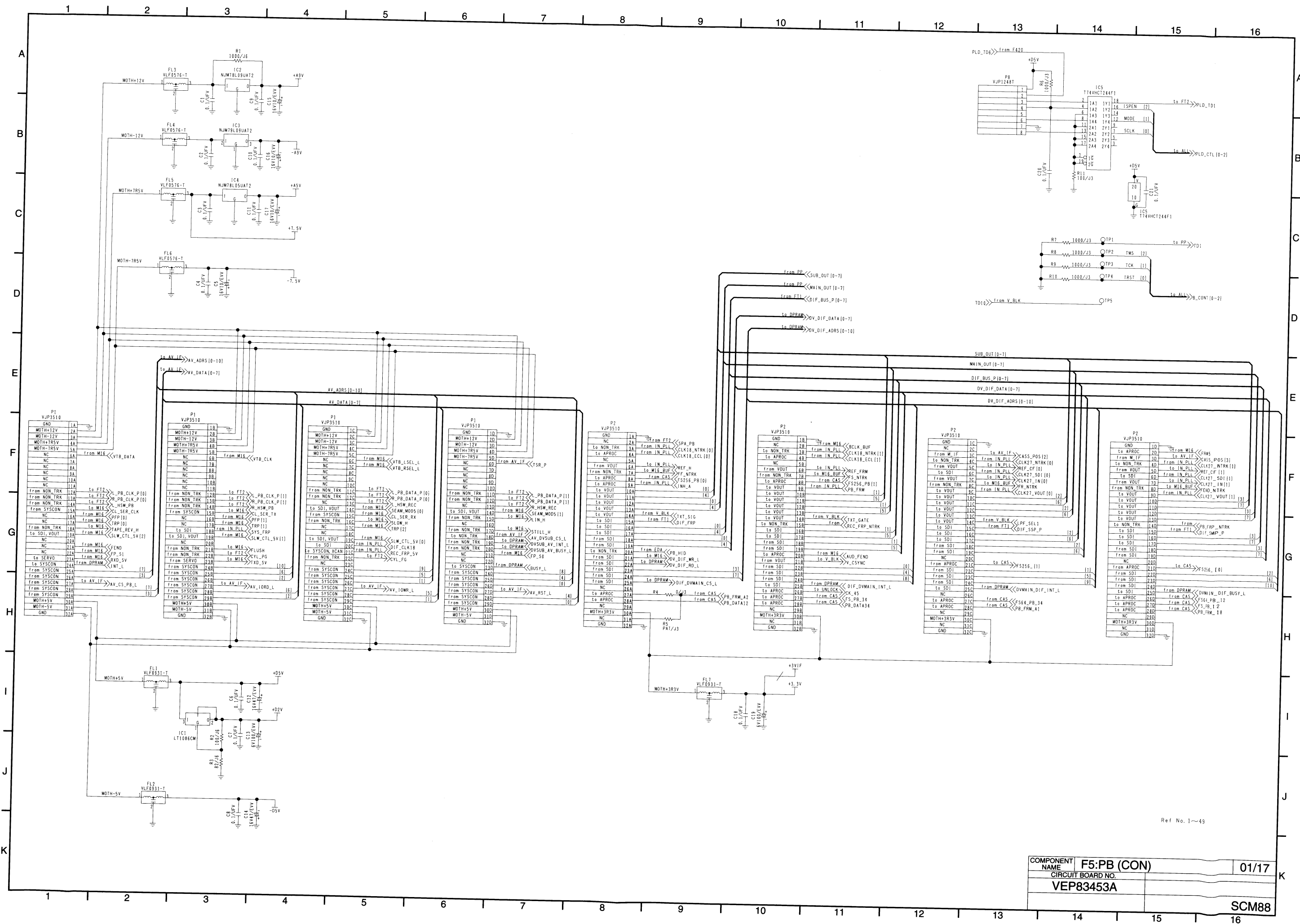


Ref No. 921~940 Series.

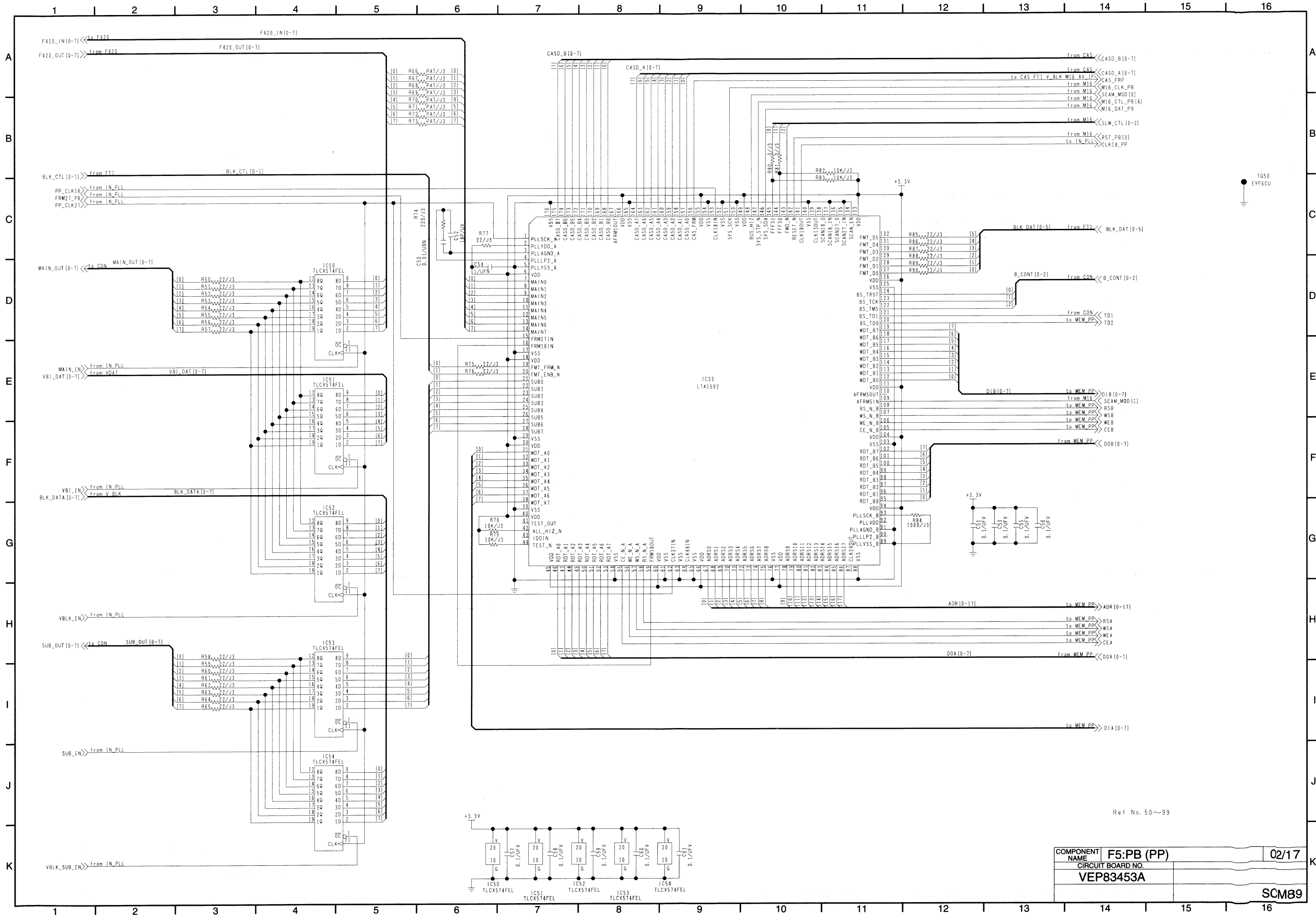
COMPONENT NAME	F4:SDI MAIN(SUB CON-2)	20/22
CIRCUIT BOARD NO.	VEP83452A	
		SCM85





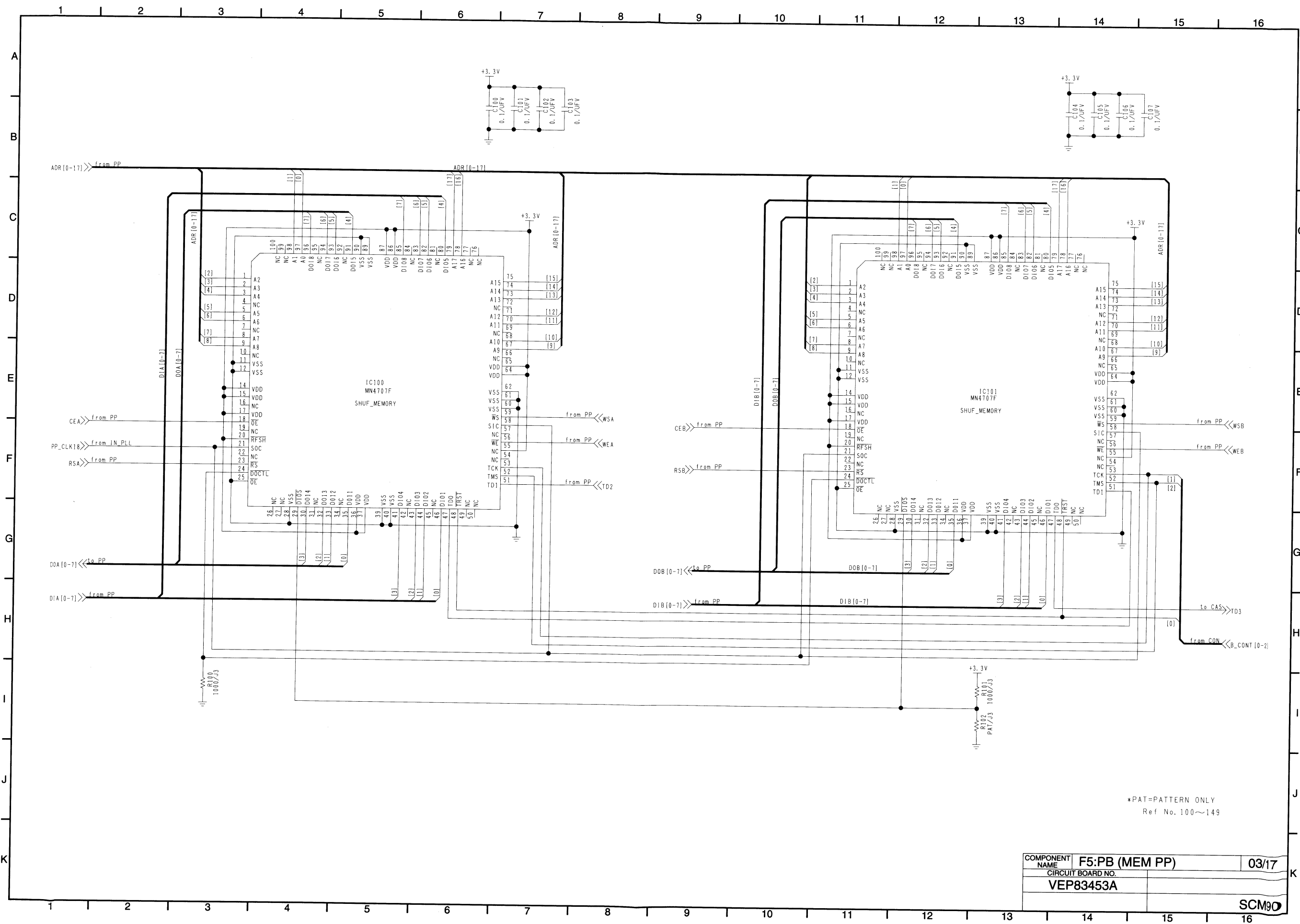


KF3W30(2/17)



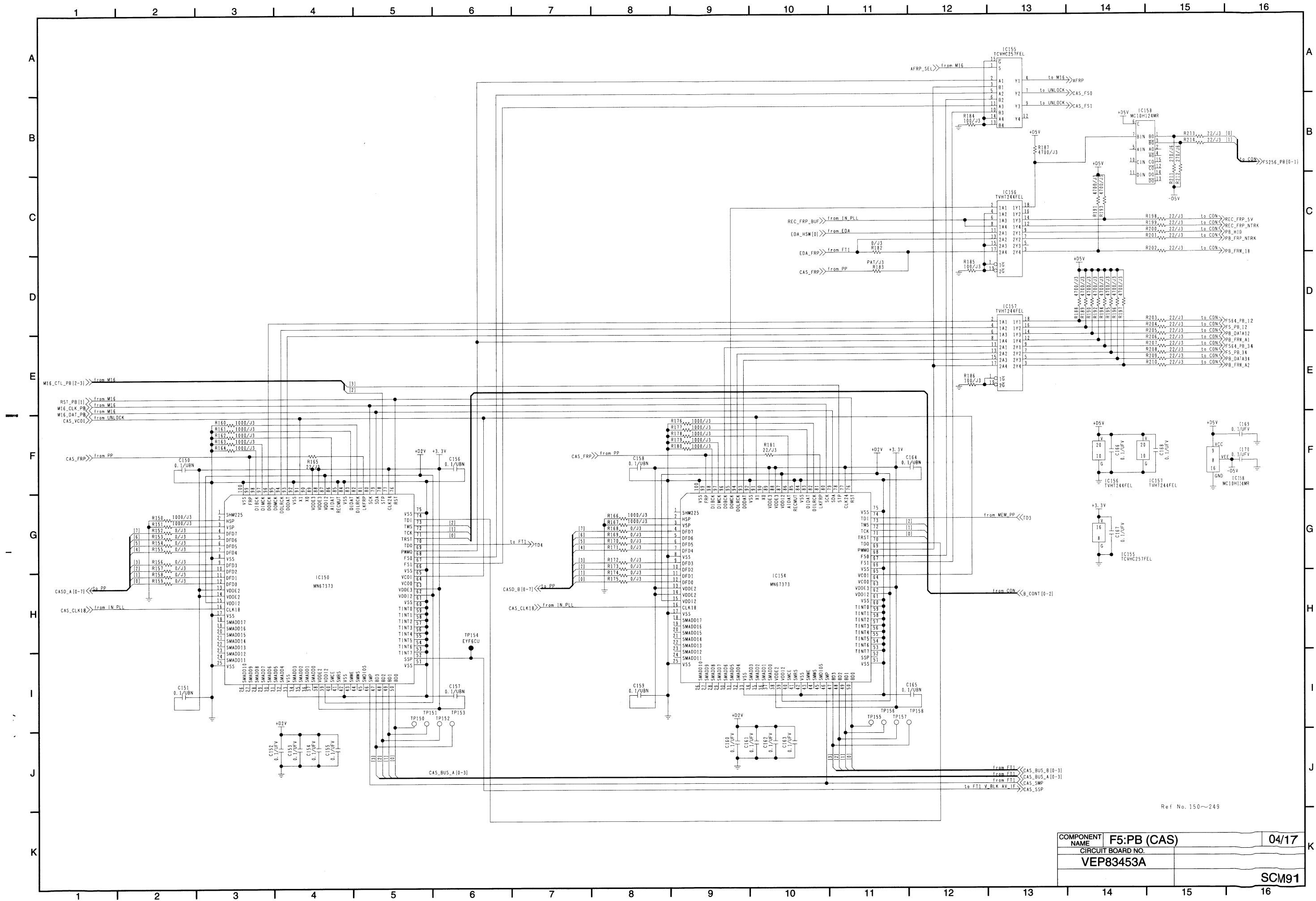
Ref No. 50~99

COMPONENT NAME	F5:PB (PP)	02/17
CIRCUIT BOARD NO.	VEP83453A	
		SCM89

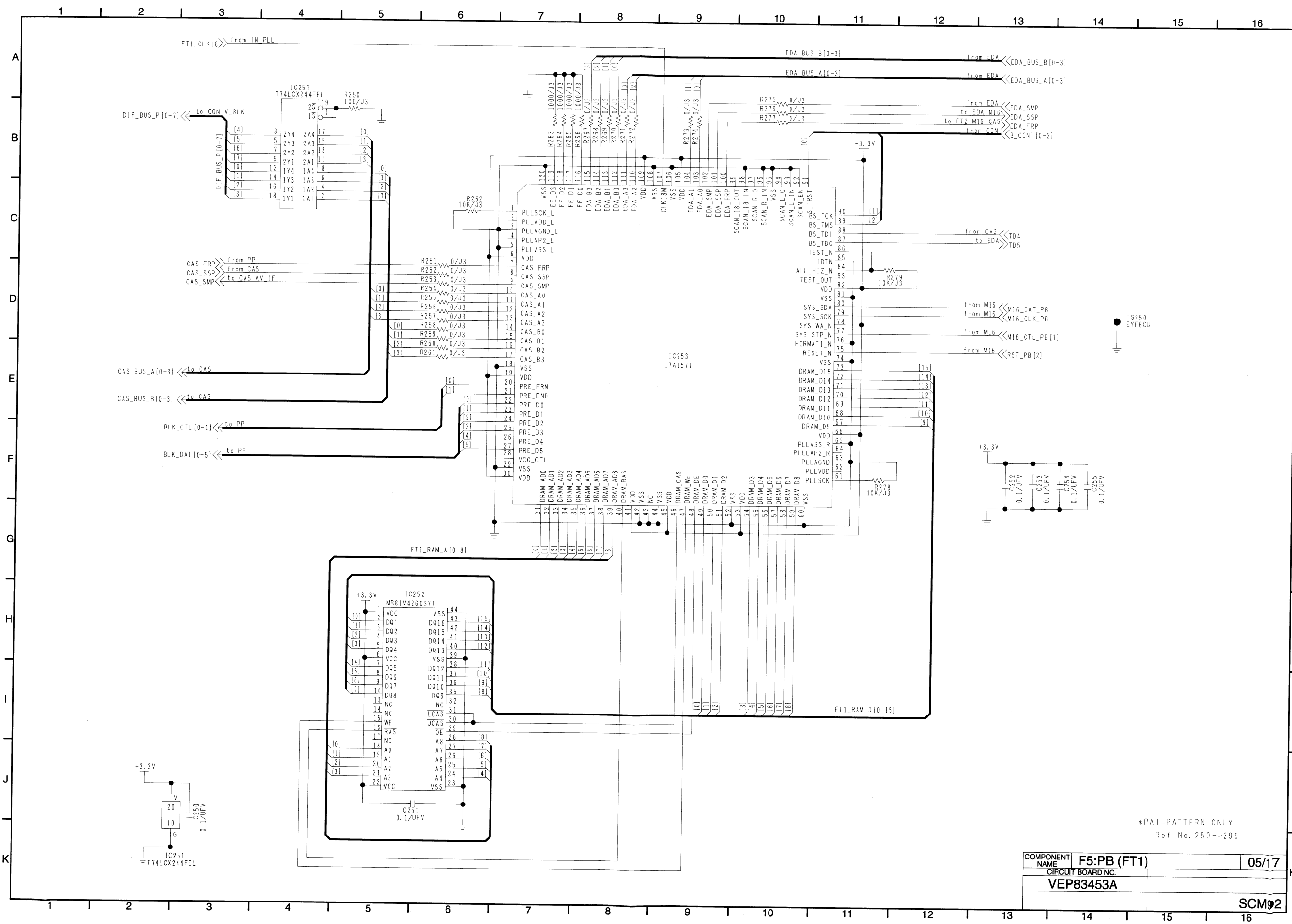


*PAT=PATTERN ONLY
Ref No. 100~149

COMPONENT NAME	F5:PB (MEM PP)	03/17
CIRCUIT BOARD NO.	VEP83453A	
SCM90		



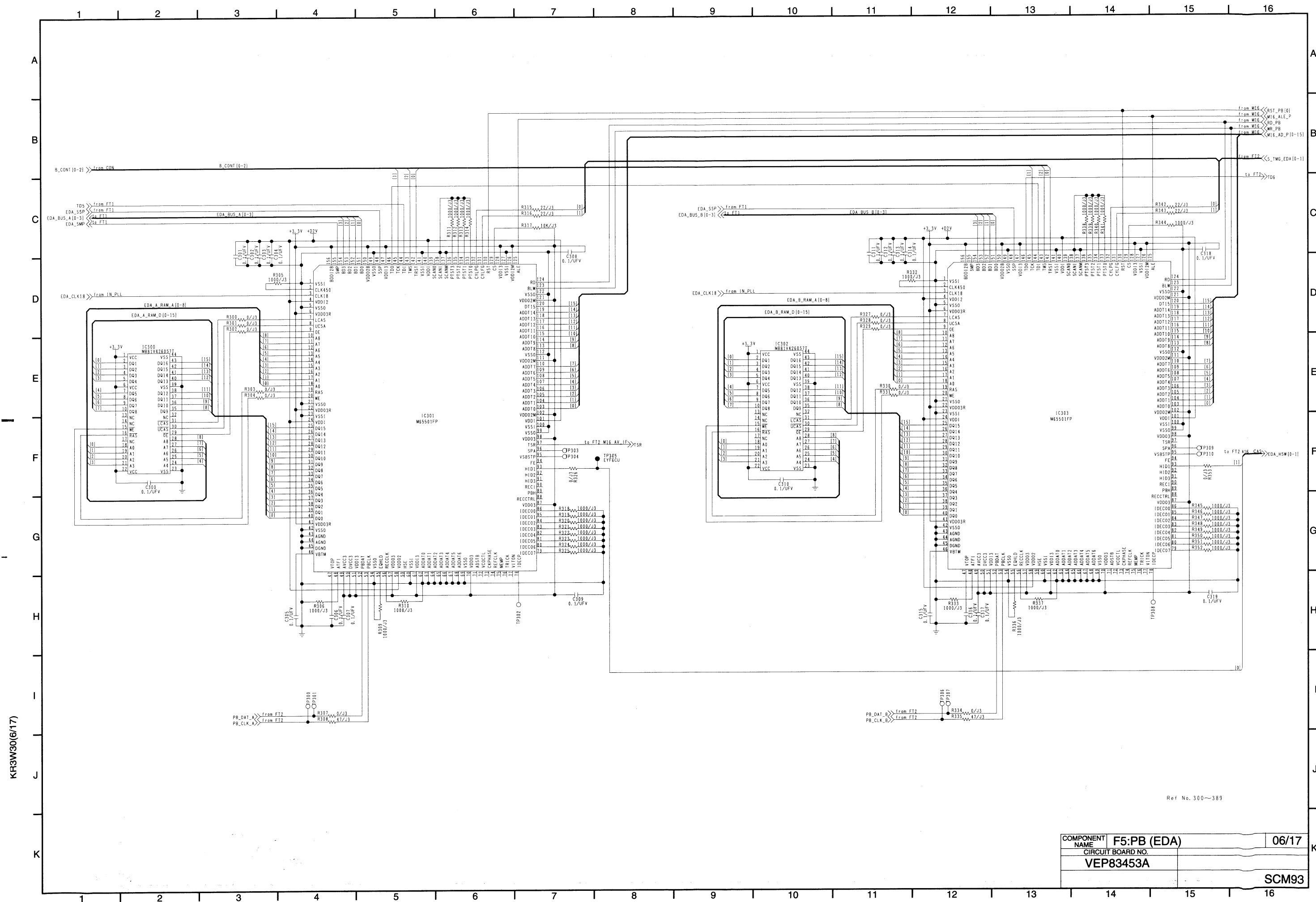
Ref No. 150~249



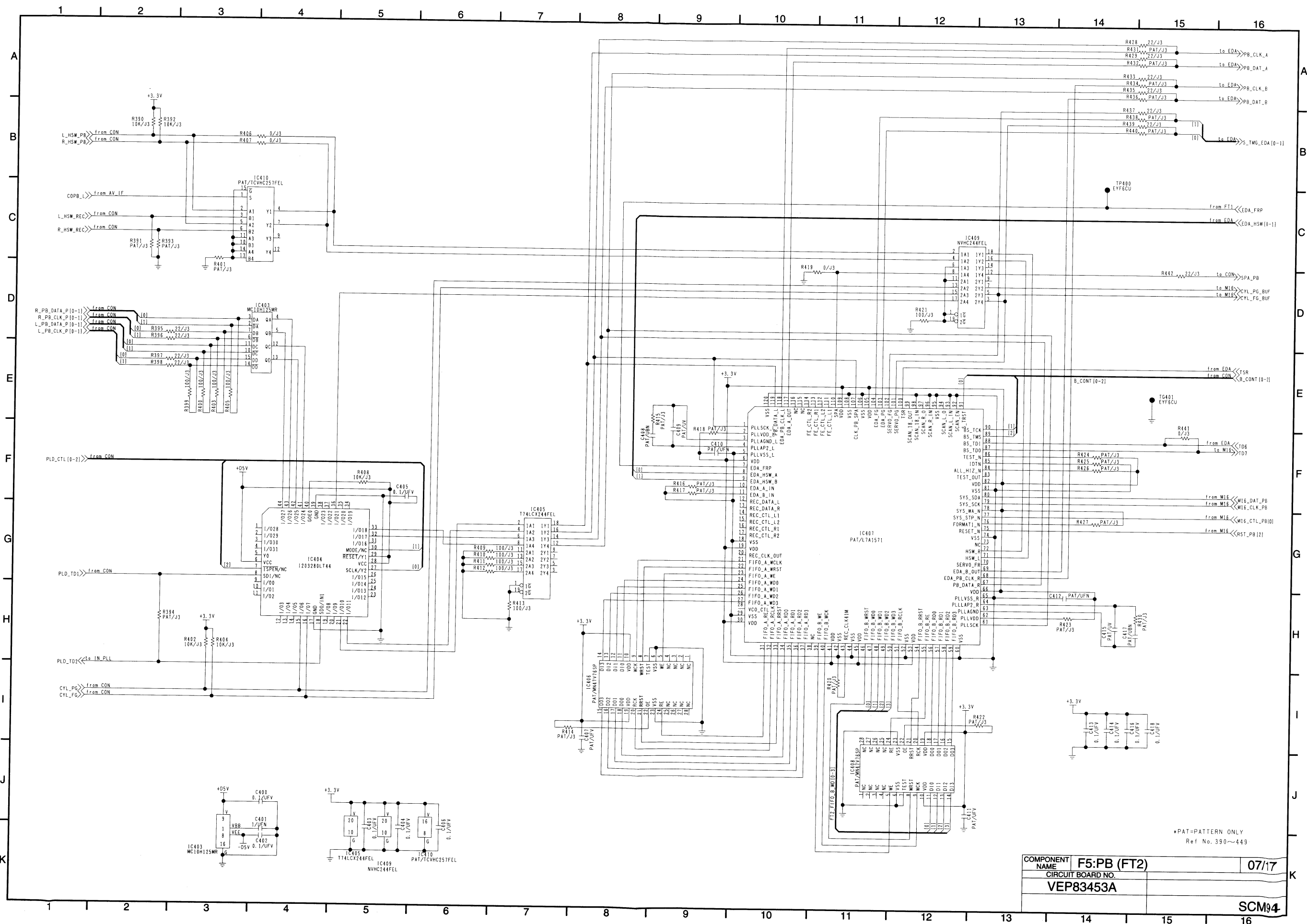
*PAT=PATTERN ONLY
Ref No. 250~299

COMPONENT NAME	F5:PB (FT1)	05/17
CIRCUIT BOARD NO.	VEP83453A	
SCM	92	

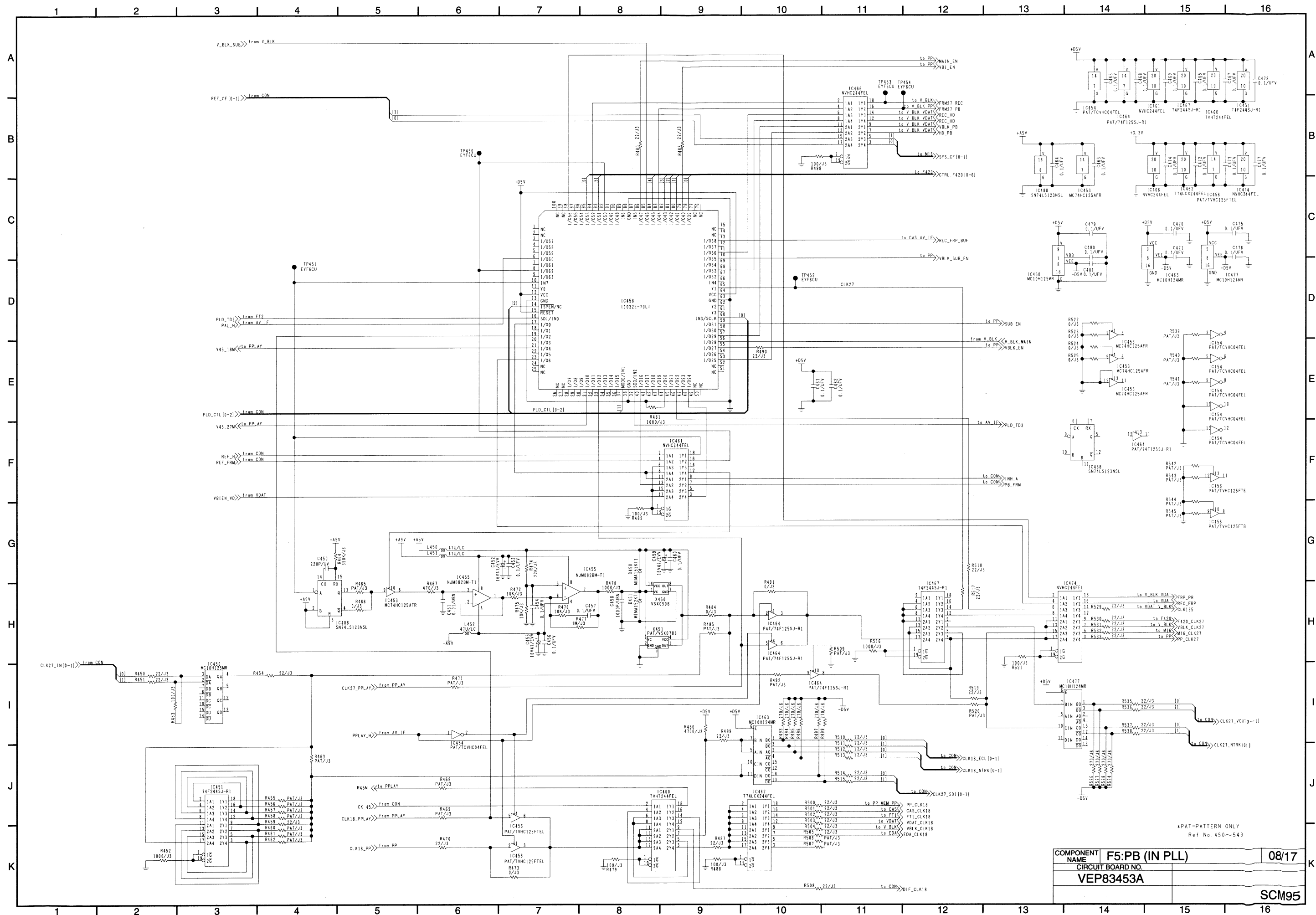
KR3W30(5/17)



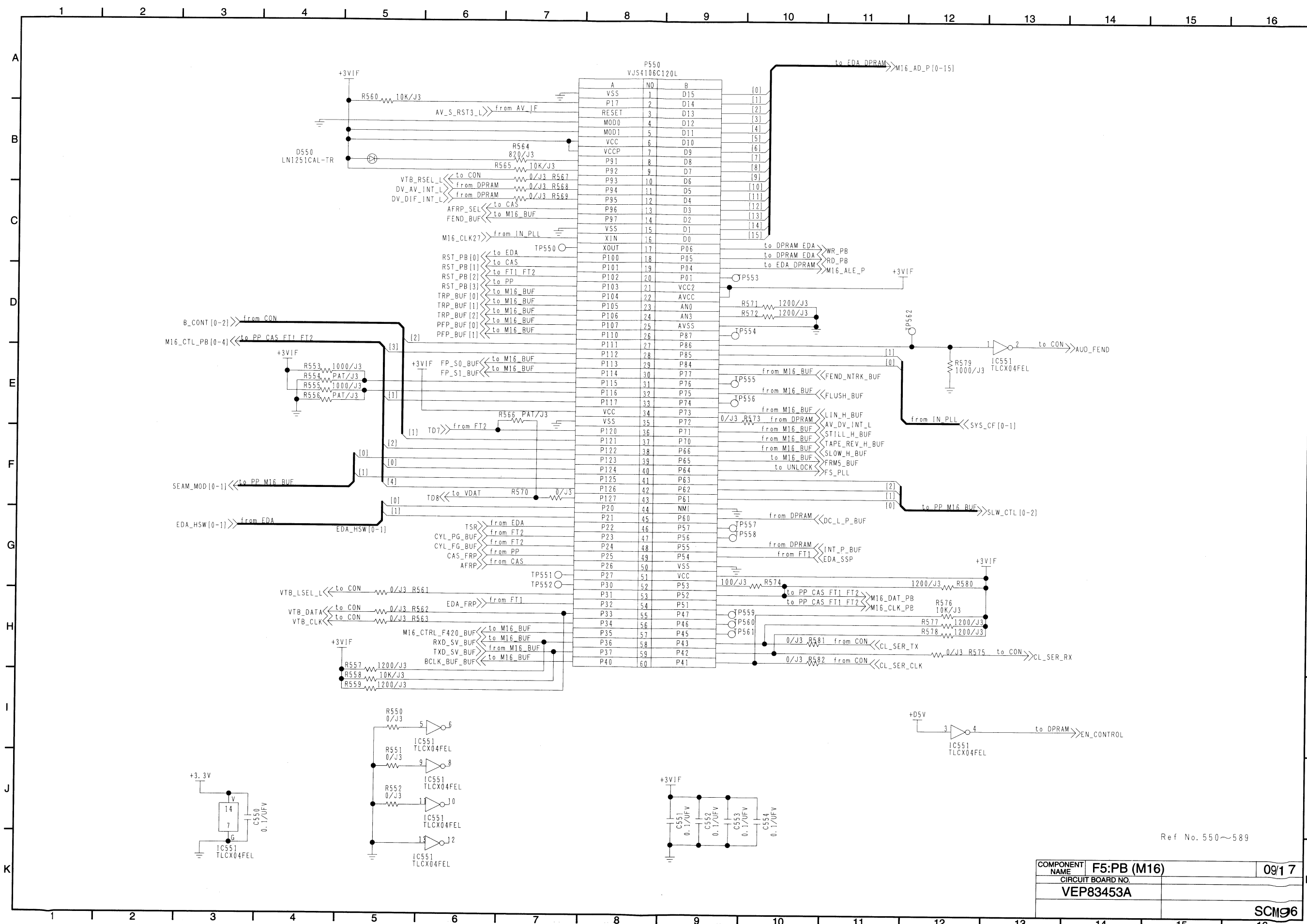
COMPONENT NAME	F5:PB (EDA)	06/17
CIRCUIT BOARD NO.		
VEP83453A		
SCM93		



KR3W30(7/17)



COMPONENT NAME	F5:PB (IN PLL)	08/17
CIRCUIT BOARD NO.		
VEP83453A		

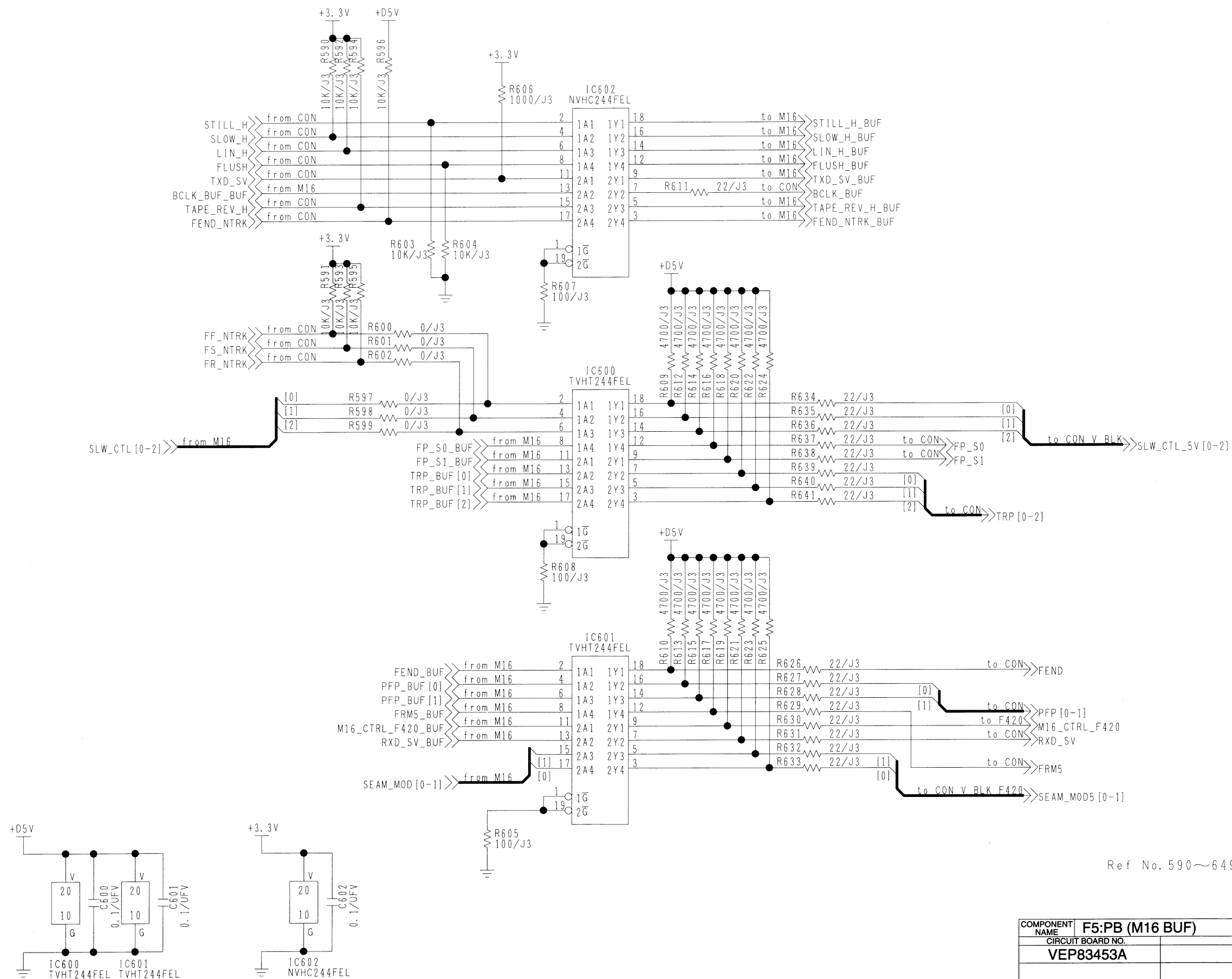


Ref No. 550~589

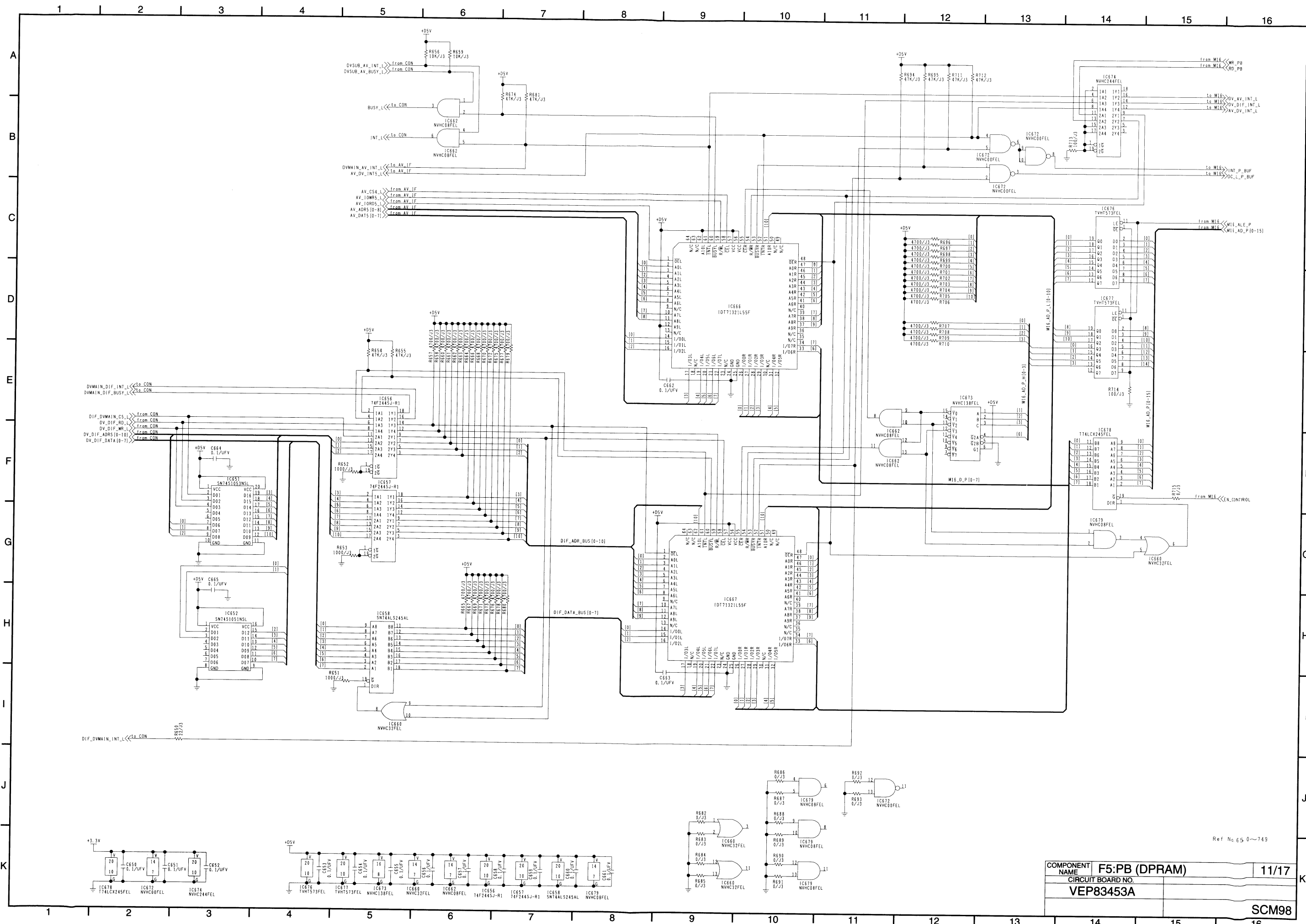
COMPONENT NAME	F5:PB (M16)	09/17
CIRCUIT BOARD NO.	VEP83453A	
SCM	96	

KR3W30(9/17)

KR3W30(10/17)



COMPONENT NAME	F5:PB (M16 BUF)	10/17
CIRCUIT BOARD NO.	VEP83453A	
		SCM97

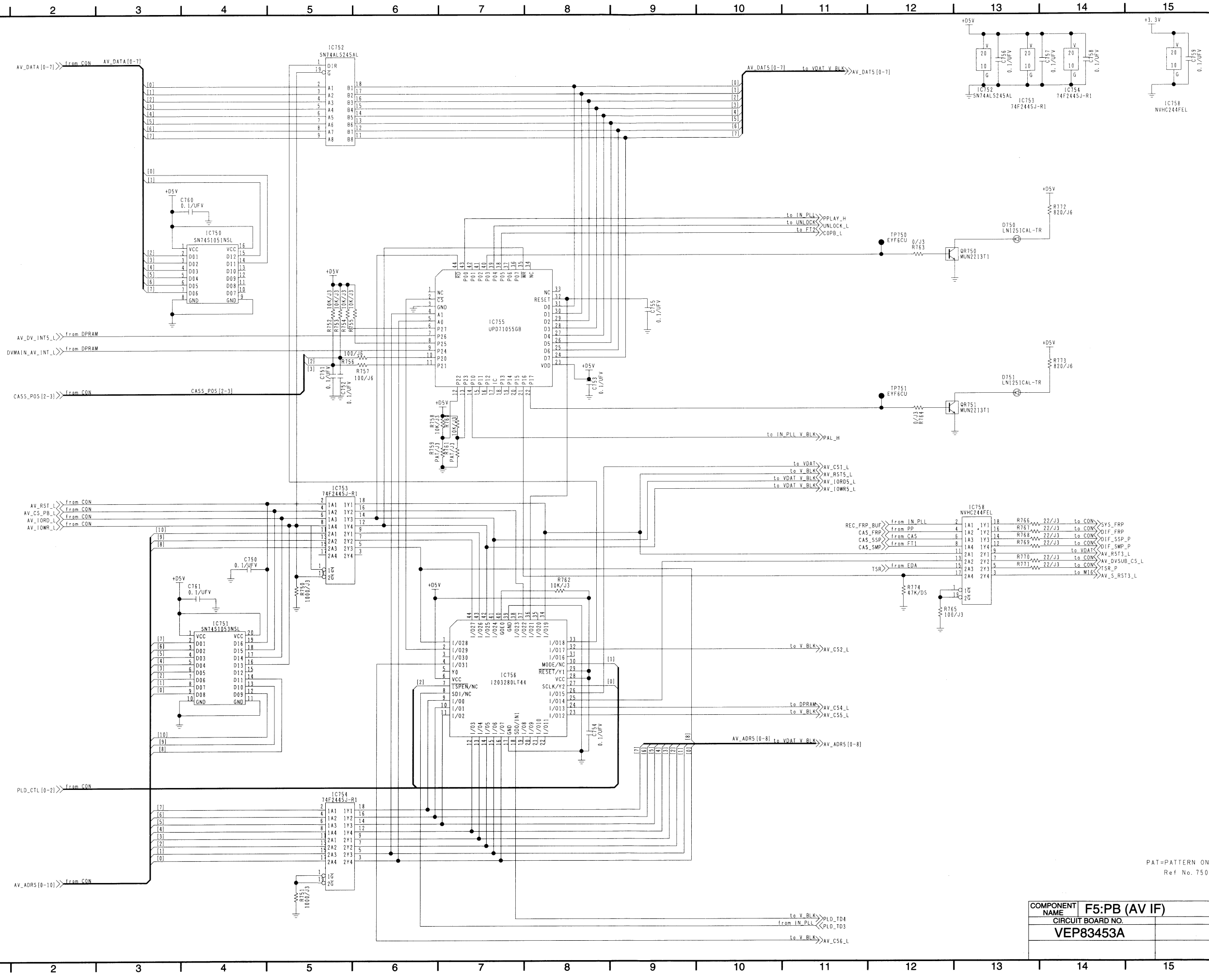


COMPONENT NAME	F5:PB (DPRAM)	11/17
CIRCUIT BOARD NO.	VEP83453A	
SCM98		

Ref No 65 0~749

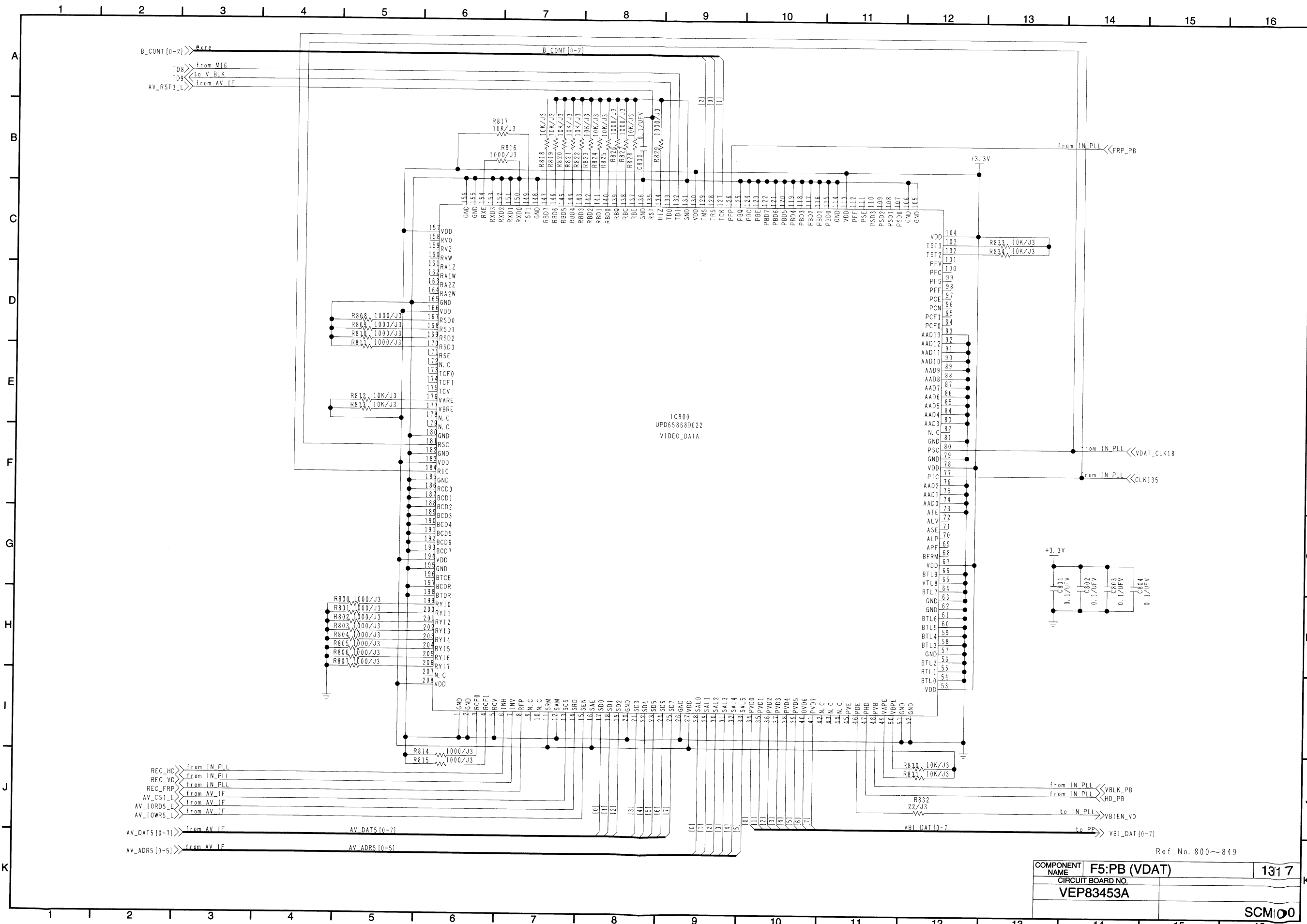
KR3W30(11/17)

KR3W30(12/17)



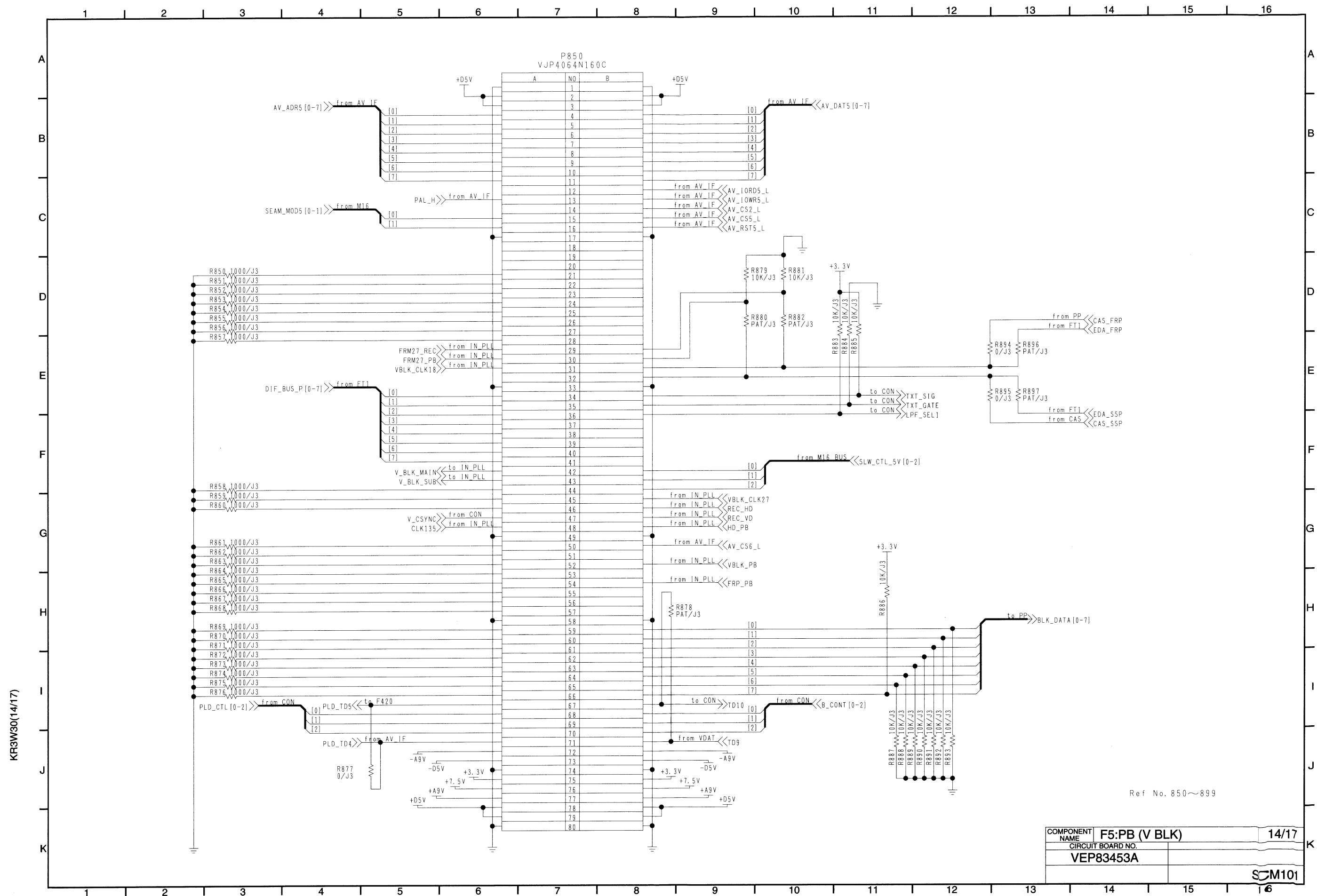
PAT=PATTERN ONLY
Ref No. 750~759

COMPONENT NAME	F5:PB (AV IF)	12/17
CIRCUIT BOARD NO.	VEP83453A	
		SCM99

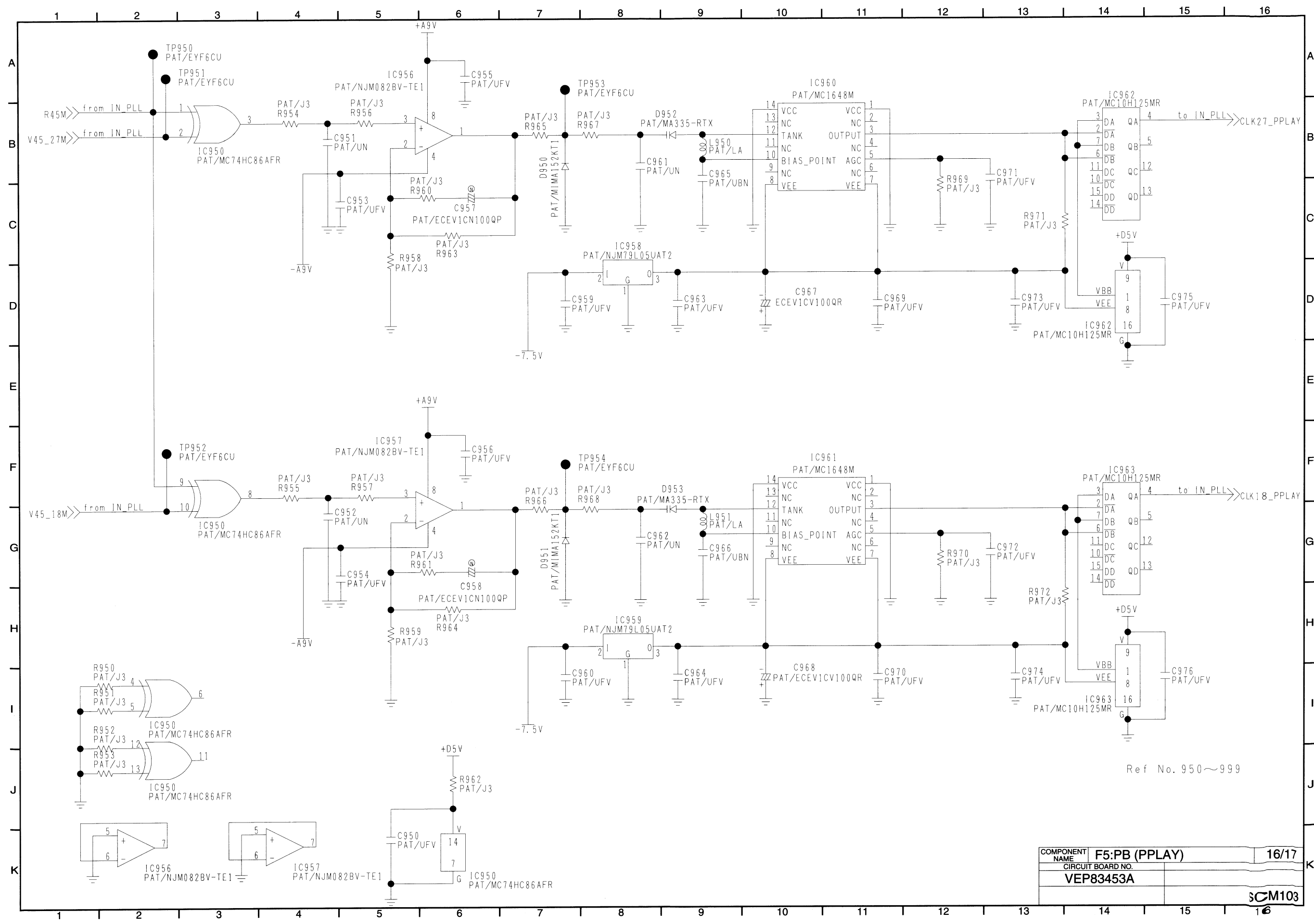


COMPONENT NAME		F5:PB (VDAT)	1317
CIRCUIT BOARD NO.		VEP83453A	
			SCM00

KR3W30(13/17)

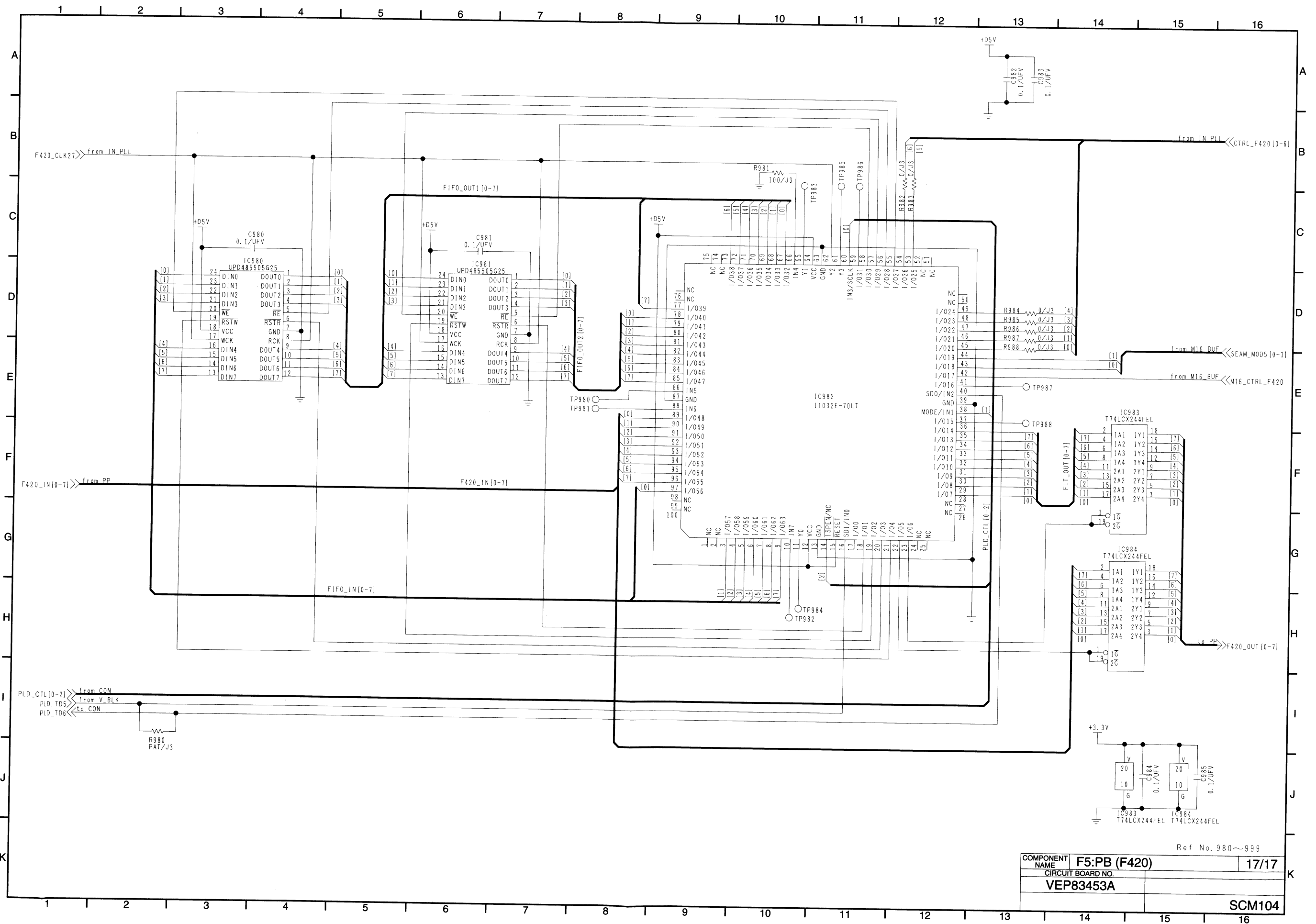


KF3W30(16/17)

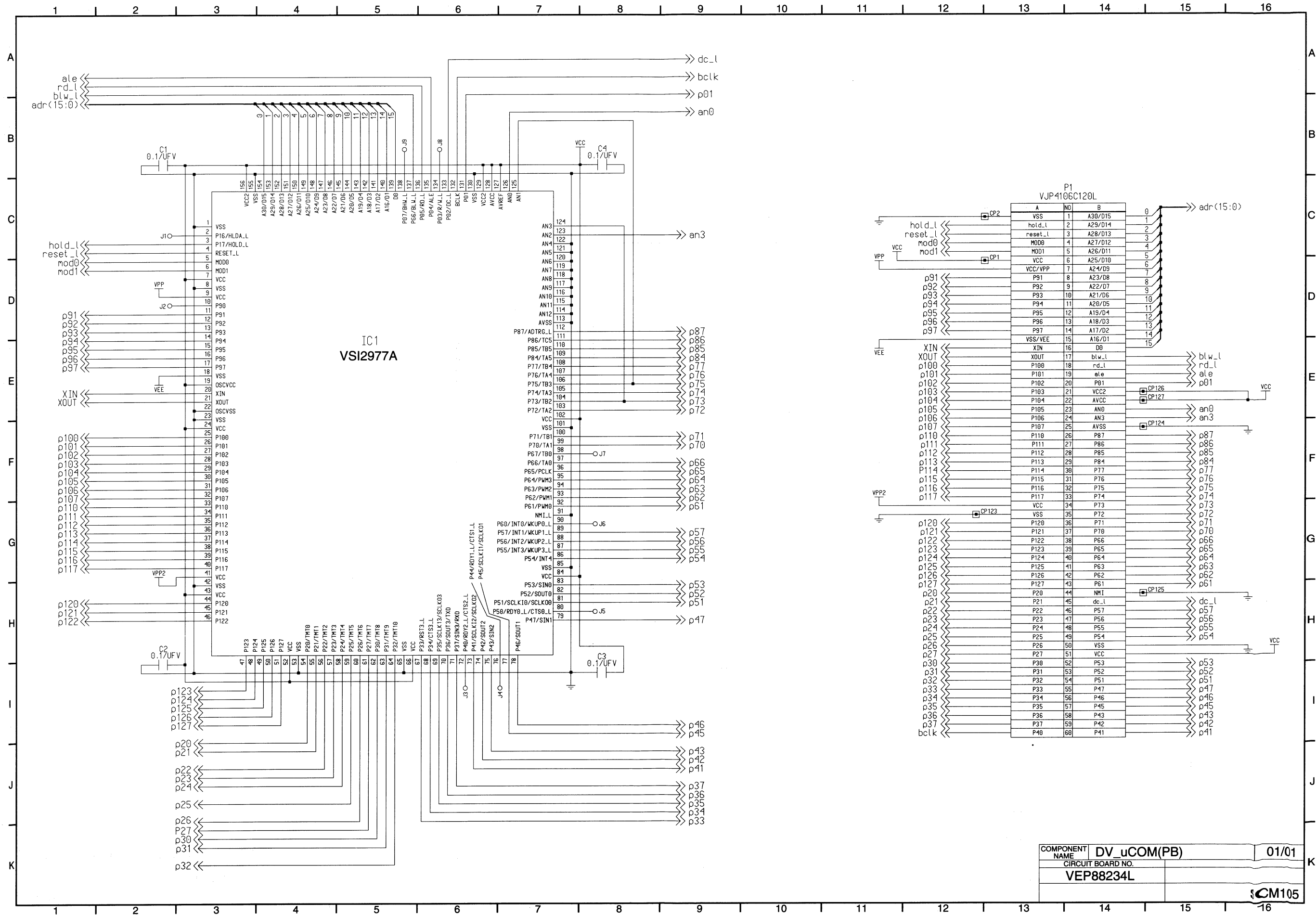


Ref No. 950~999

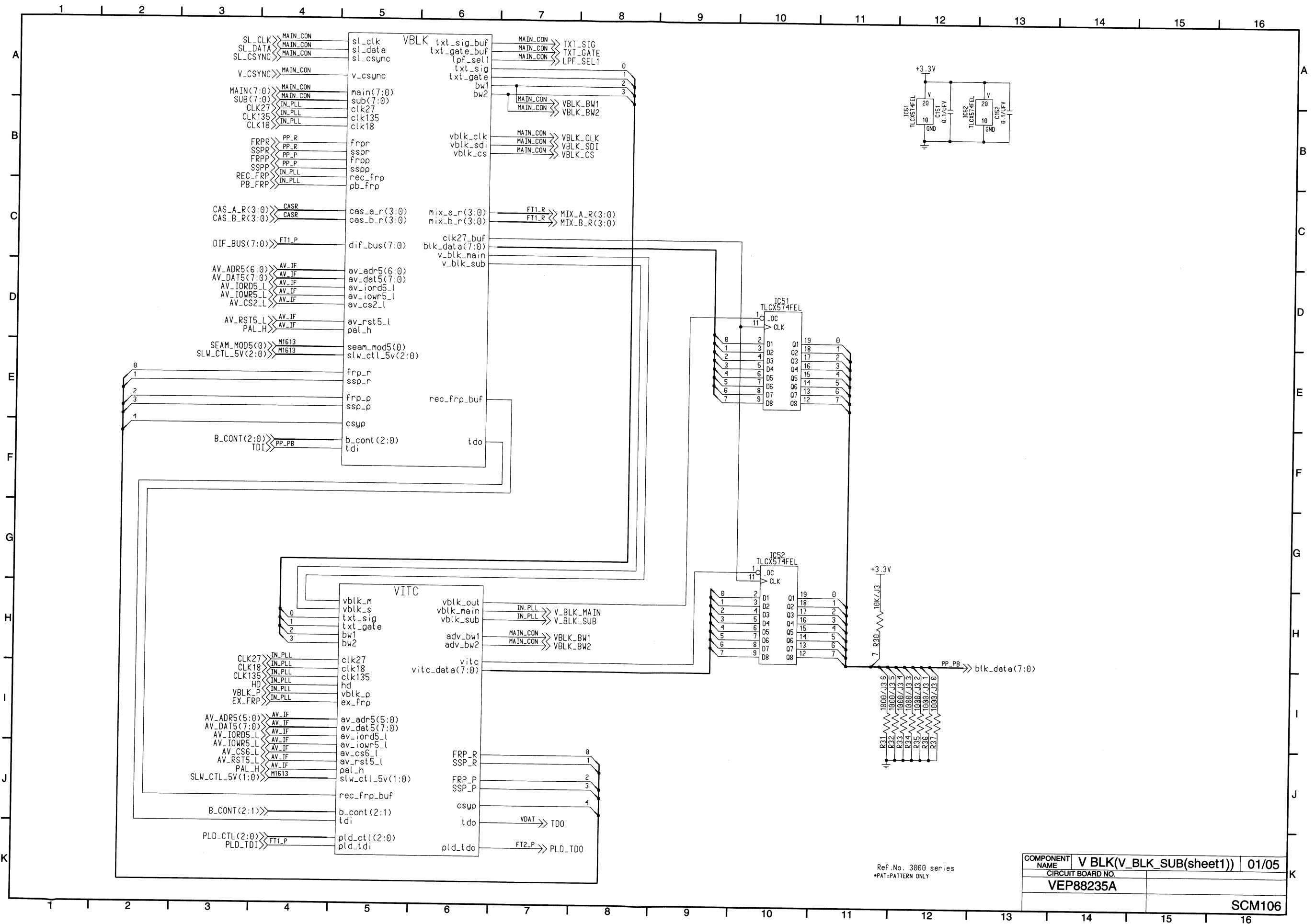
COMPONENT NAME	F5:PB (PPLAY)	16/17
CIRCUIT BOARD NO.	VEP83453A	
		SCM103



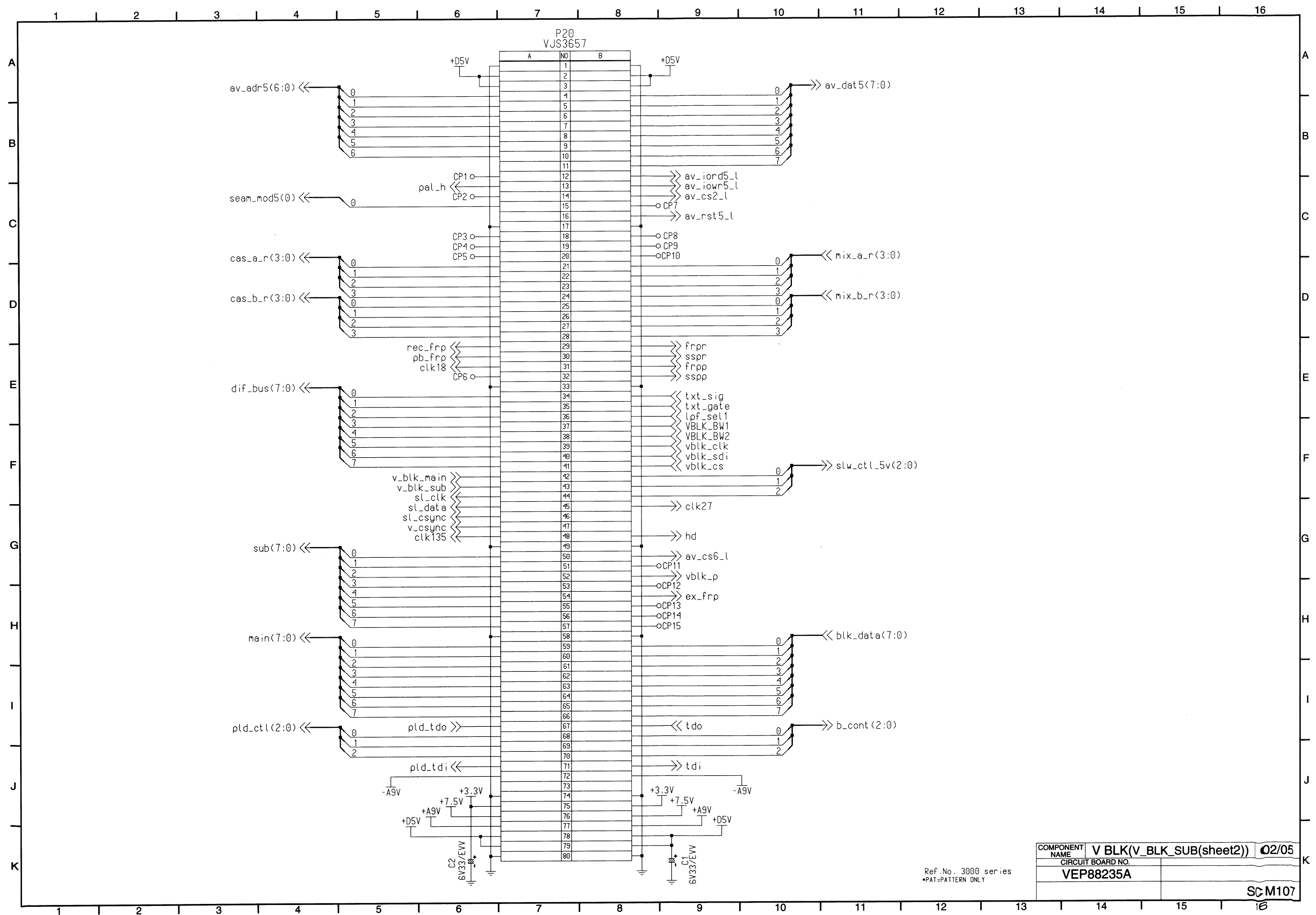
KR8717(1/1)



COMPONENT NAME	DV_uCOM(PB)	01/01
CIRCUIT BOARD NO.	VEP88234L	
		CM105

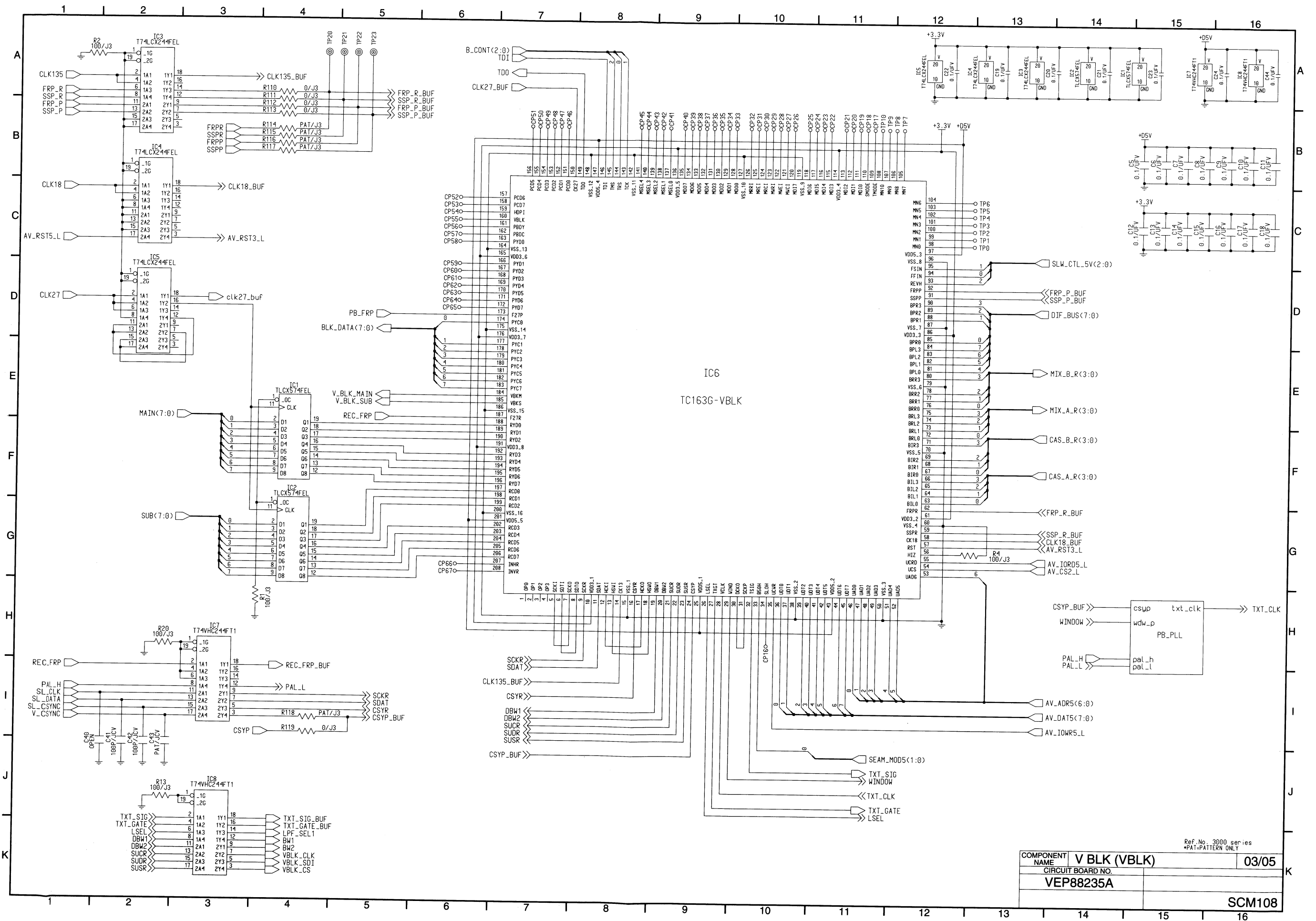


KR8716(2/5)



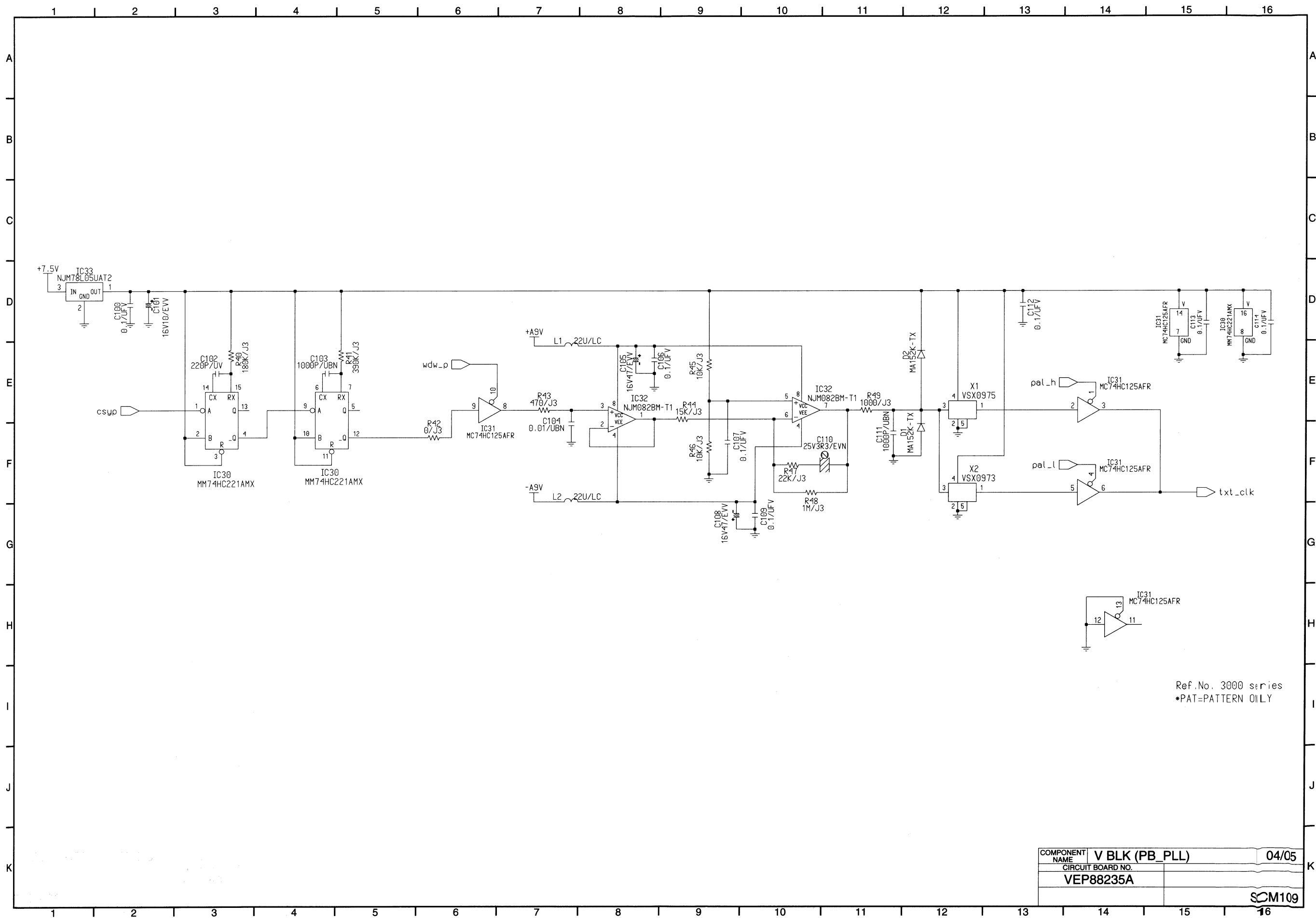
Ref.No. 3000 series
*PAT=PATTERN ONLY

COMPONENT NAME	V BLK(V_BLK_SUB(sheet2))	02/05
CIRCUIT BOARD NO.	VEP88235A	
		SCM107

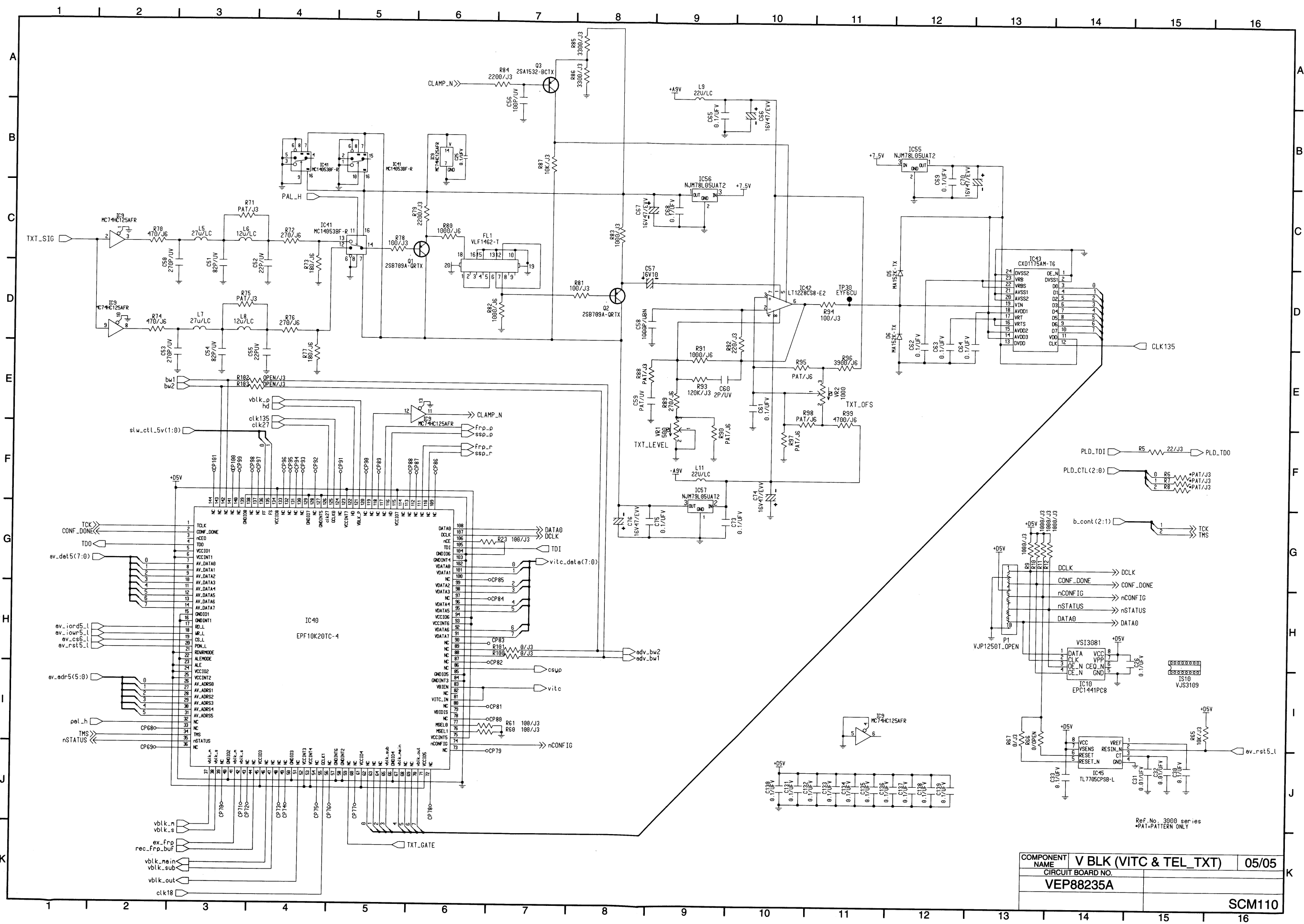


COMPONENT NAME	V BLK (VBLK)	03/05
CIRCUIT BOARD NO.	VEP88235A	
SCM108		

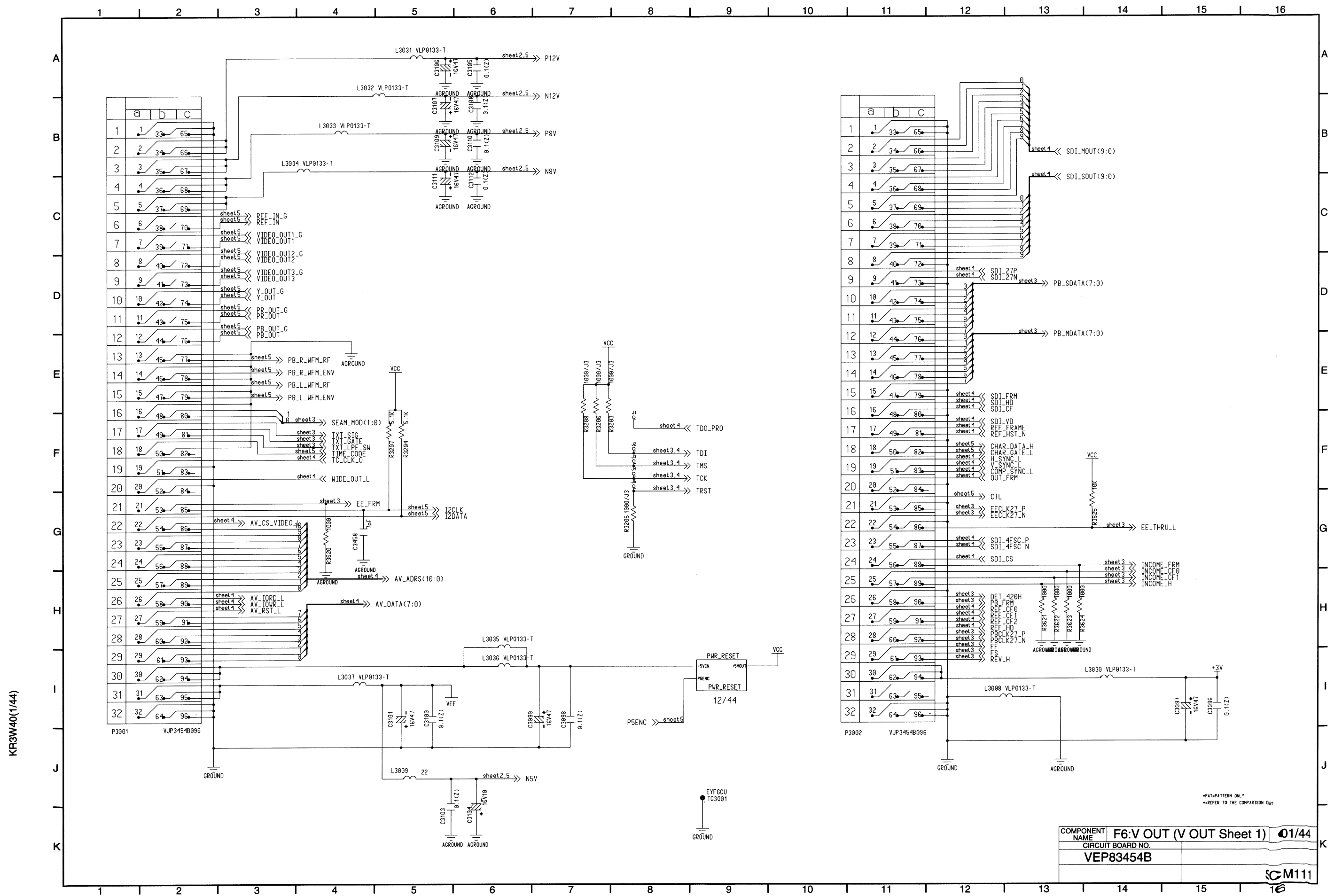
KB8716(4/5)

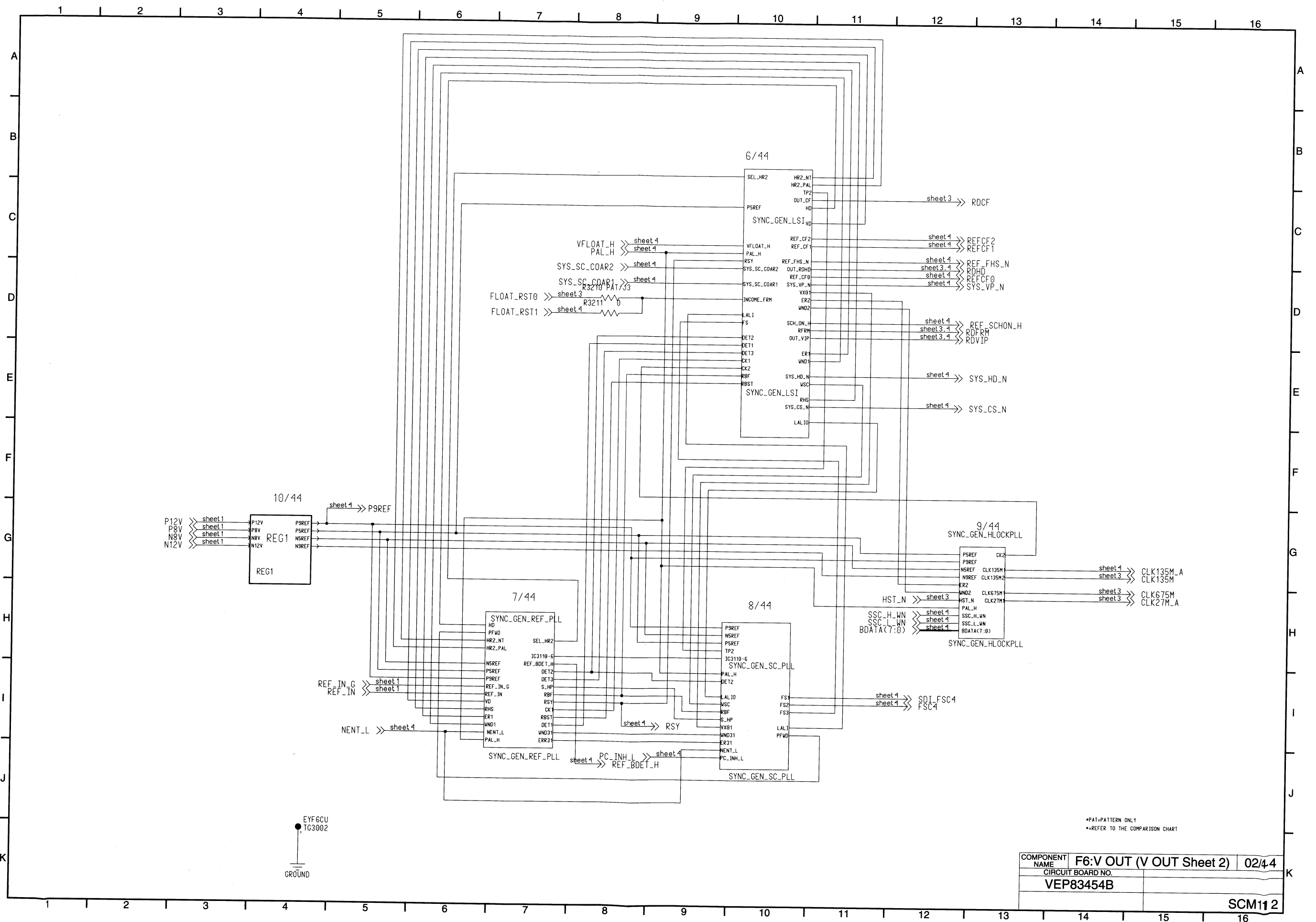


COMPONENT NAME	V BLK (PB_PLL)	04/05
CIRCUIT BOARD NO.	VEP88235A	
		SCM109

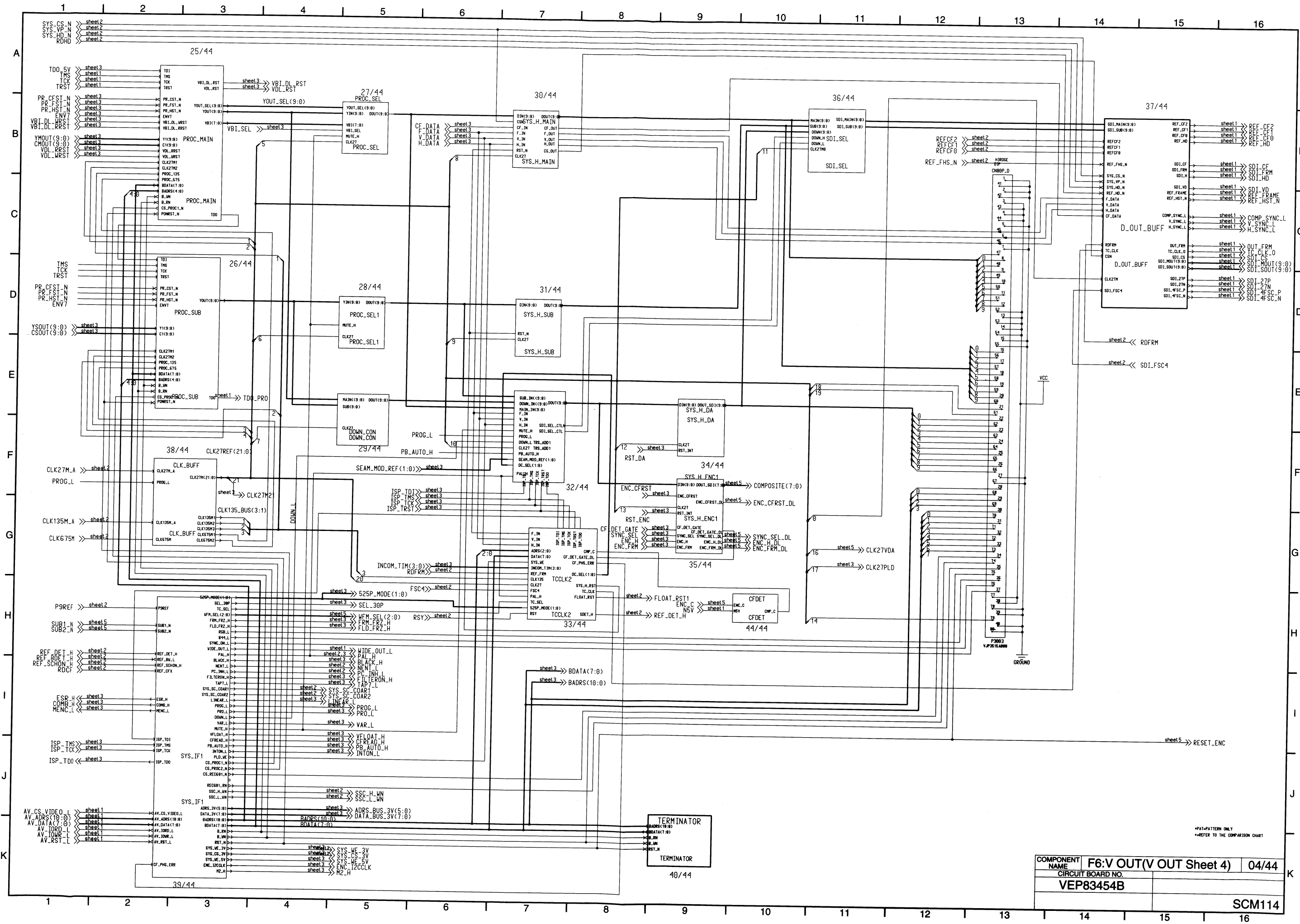


KR8716(5/5)

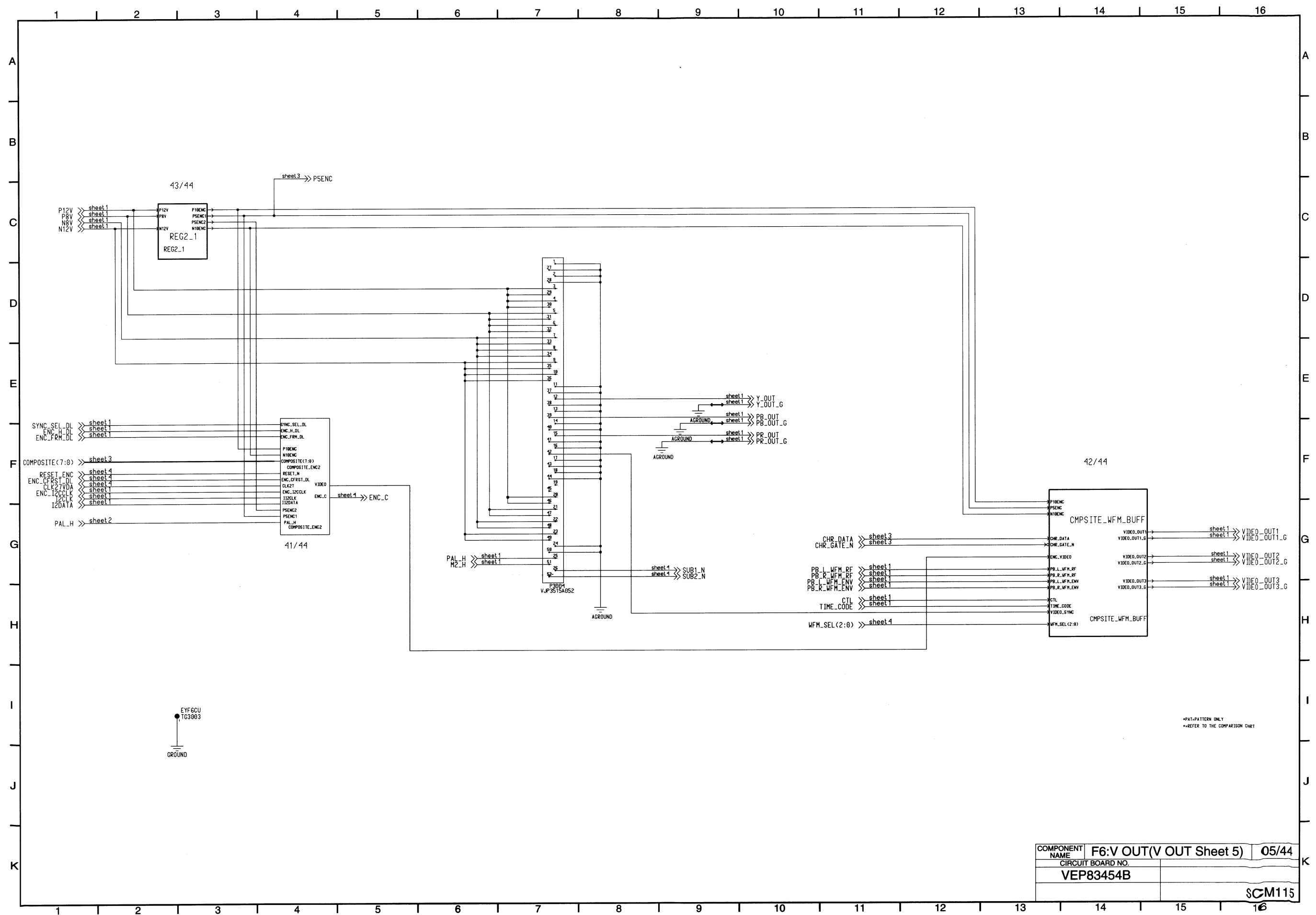








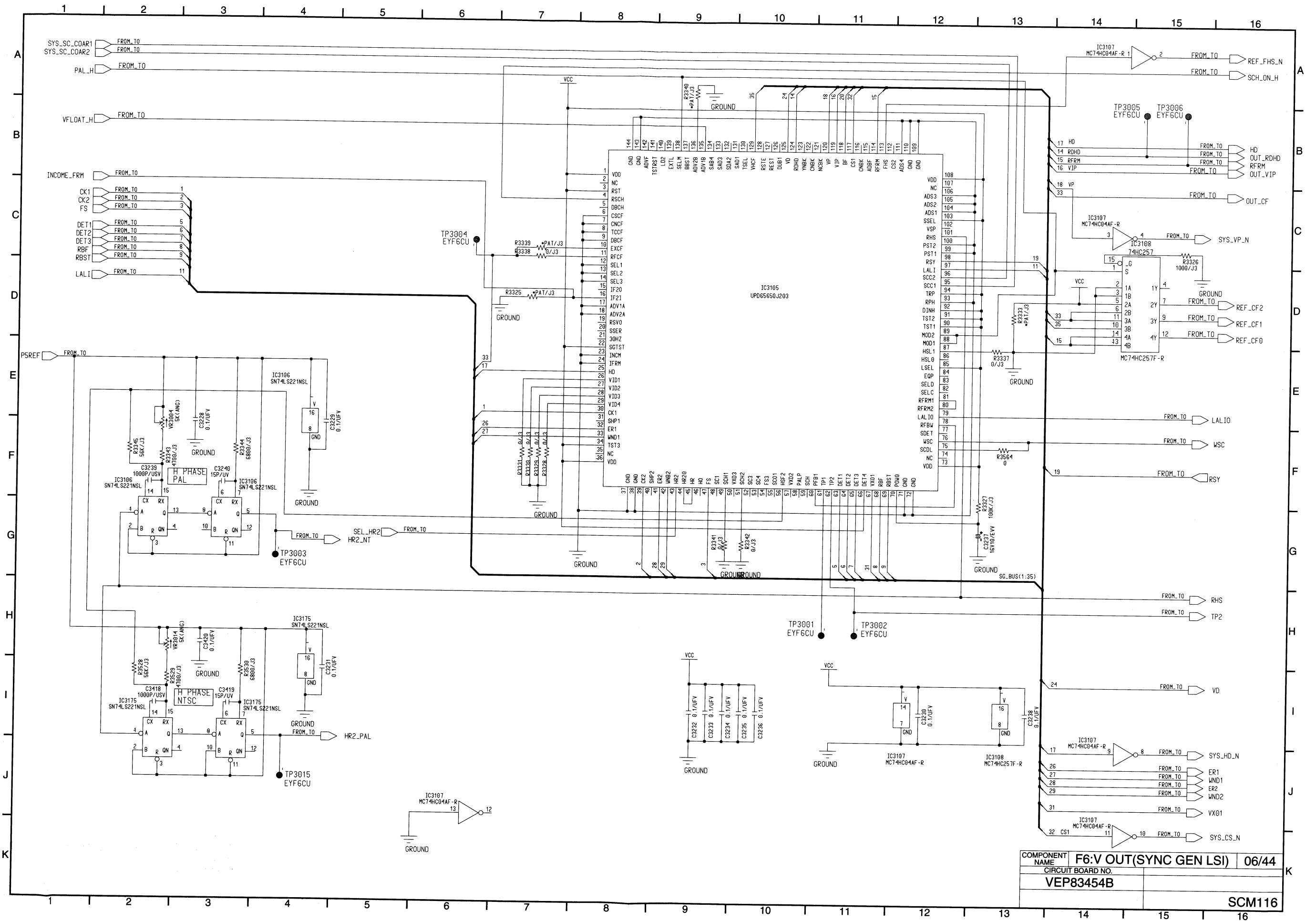
COMPONENT NAME	F6:V OUT(V OUT Sheet 4)	04/44
CIRCUIT BOARD NO.	VEP83454B	
SCM114		



KR3W40(5/44)

*PAT=PATTERN ONLY
*REFER TO THE COMPARISON CHIT

COMPONENT NAME	F6:V OUT(V OUT Sheet 5)	05/44
CIRCUIT BOARD NO.		
VEP83454B		
SCM115		

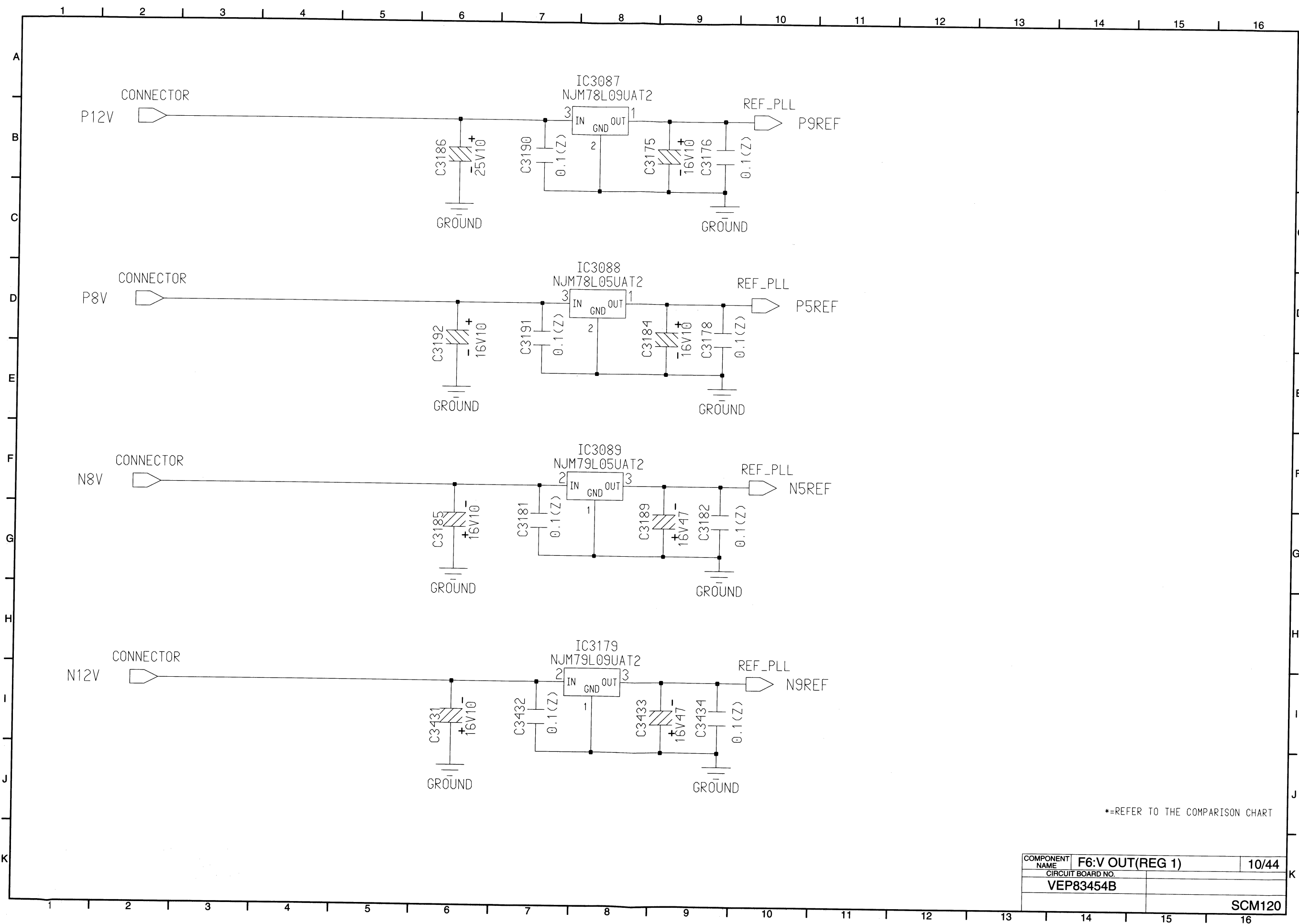


COMPONENT NAME	F6:V OUT(SYNC GEN LSI)	06/44
CIRCUIT BOARD NO.	VEP83454B	
SCM116		

KF3W40(6/44)



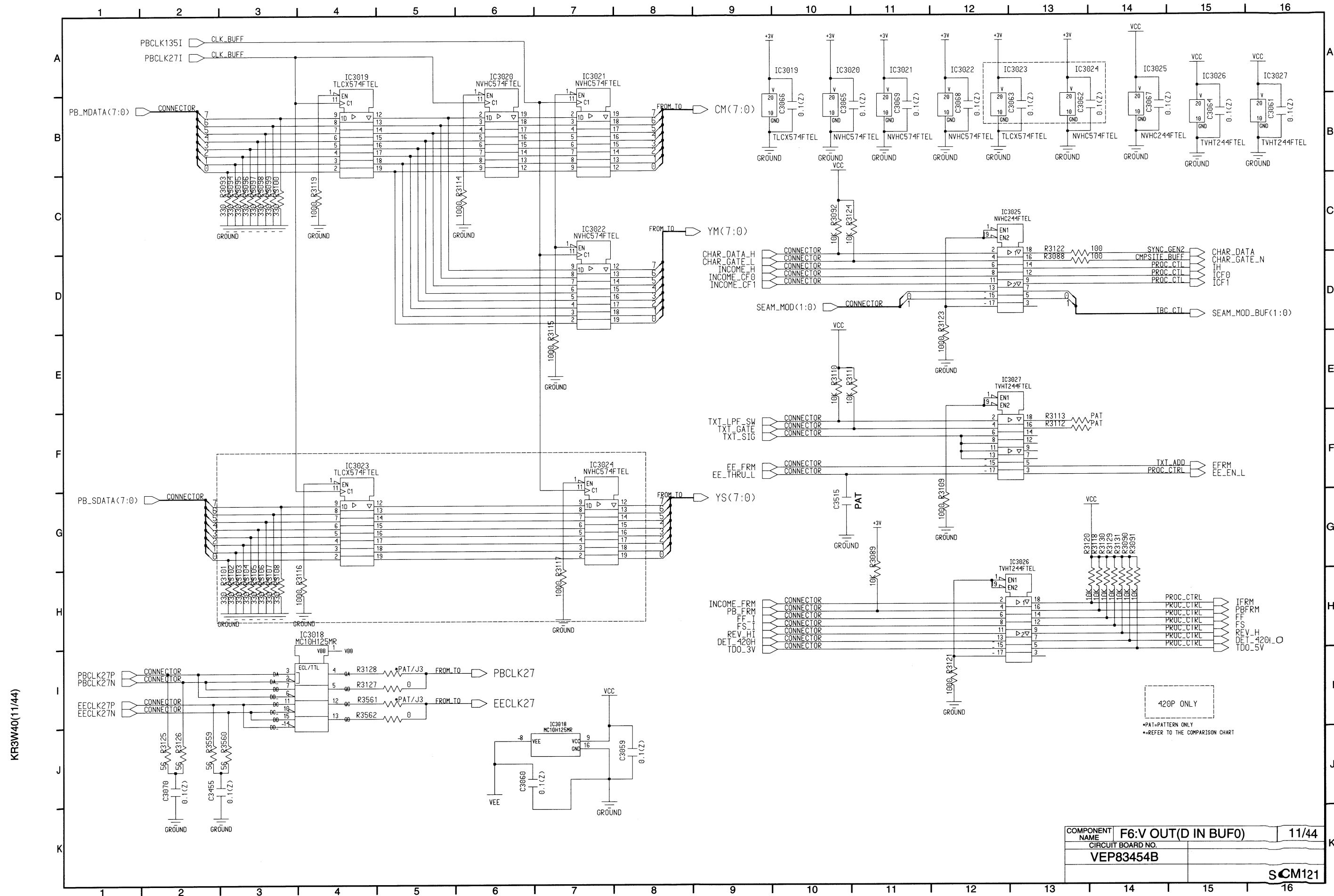
COMPONENT NAME	F6:V OUT(SYCN GEN HLOCKPLL)	09/44
CIRCUIT BOARD NO.		
VEP83454B		
		SM119

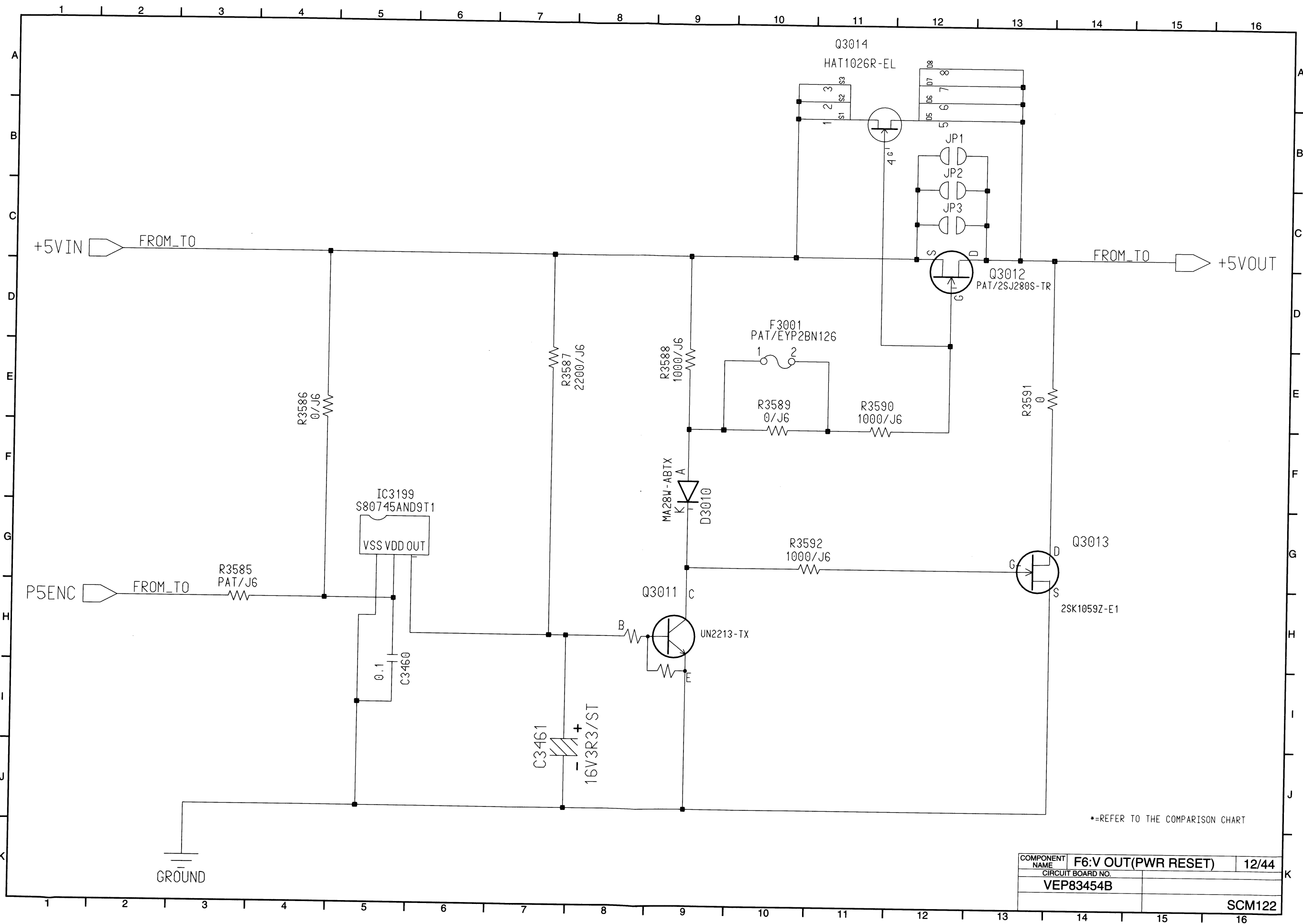


*=REFER TO THE COMPARISON CHART

COMPONENT NAME	F6:V OUT(REG 1)	10/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM120

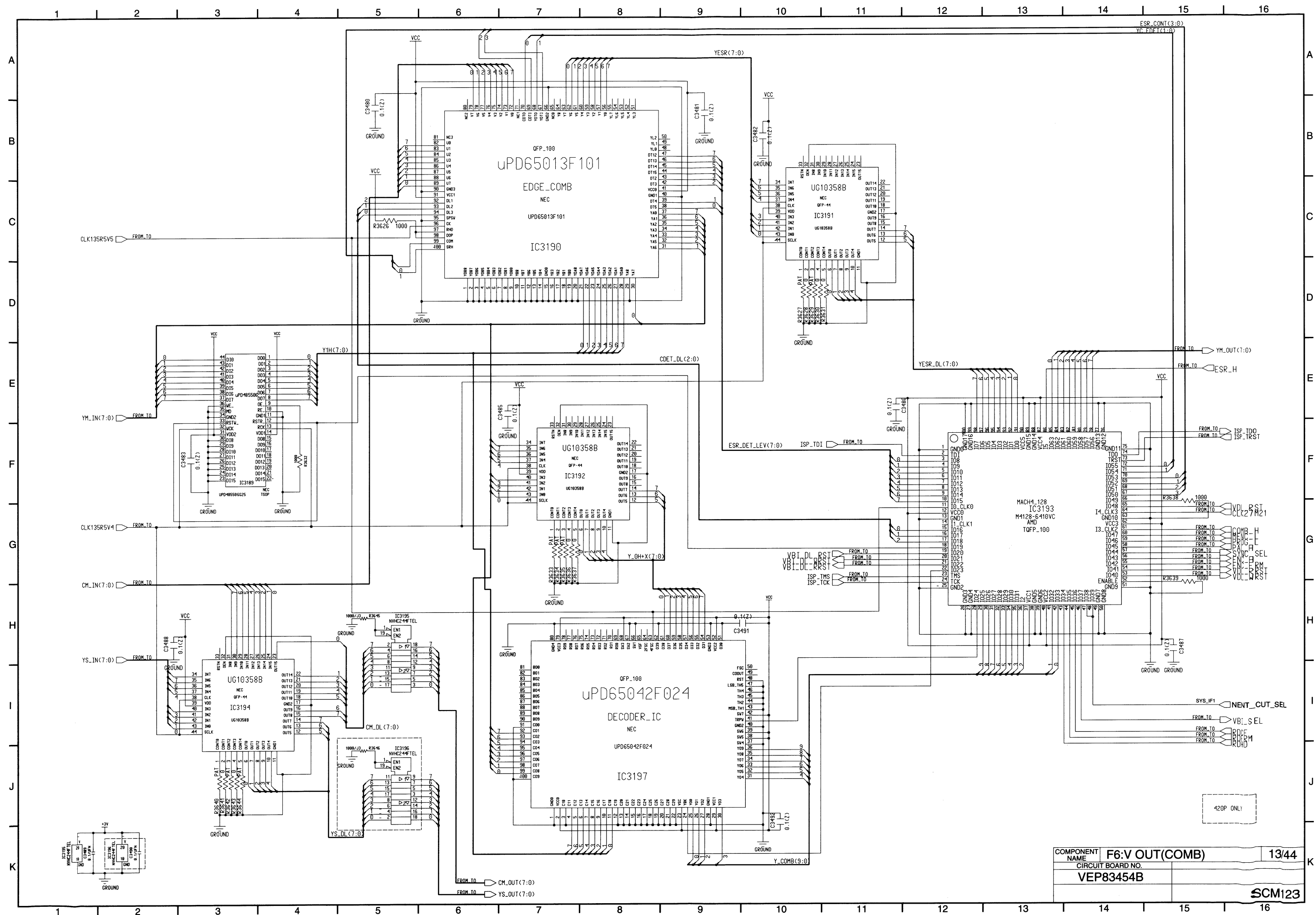
KR3W40(10/44)



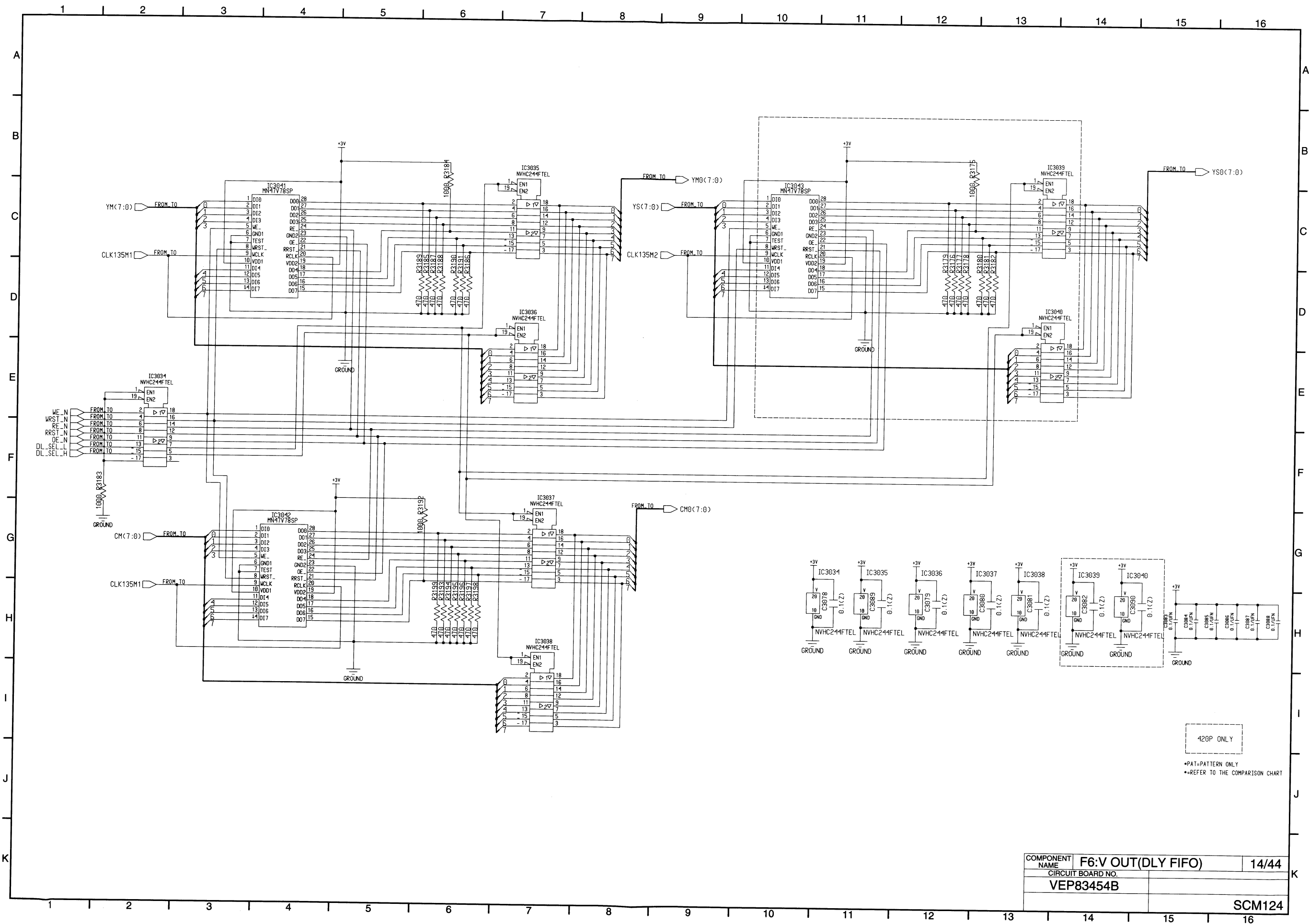


COMPONENT NAME	F6:V OUT(PWR RESET)	12/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM122

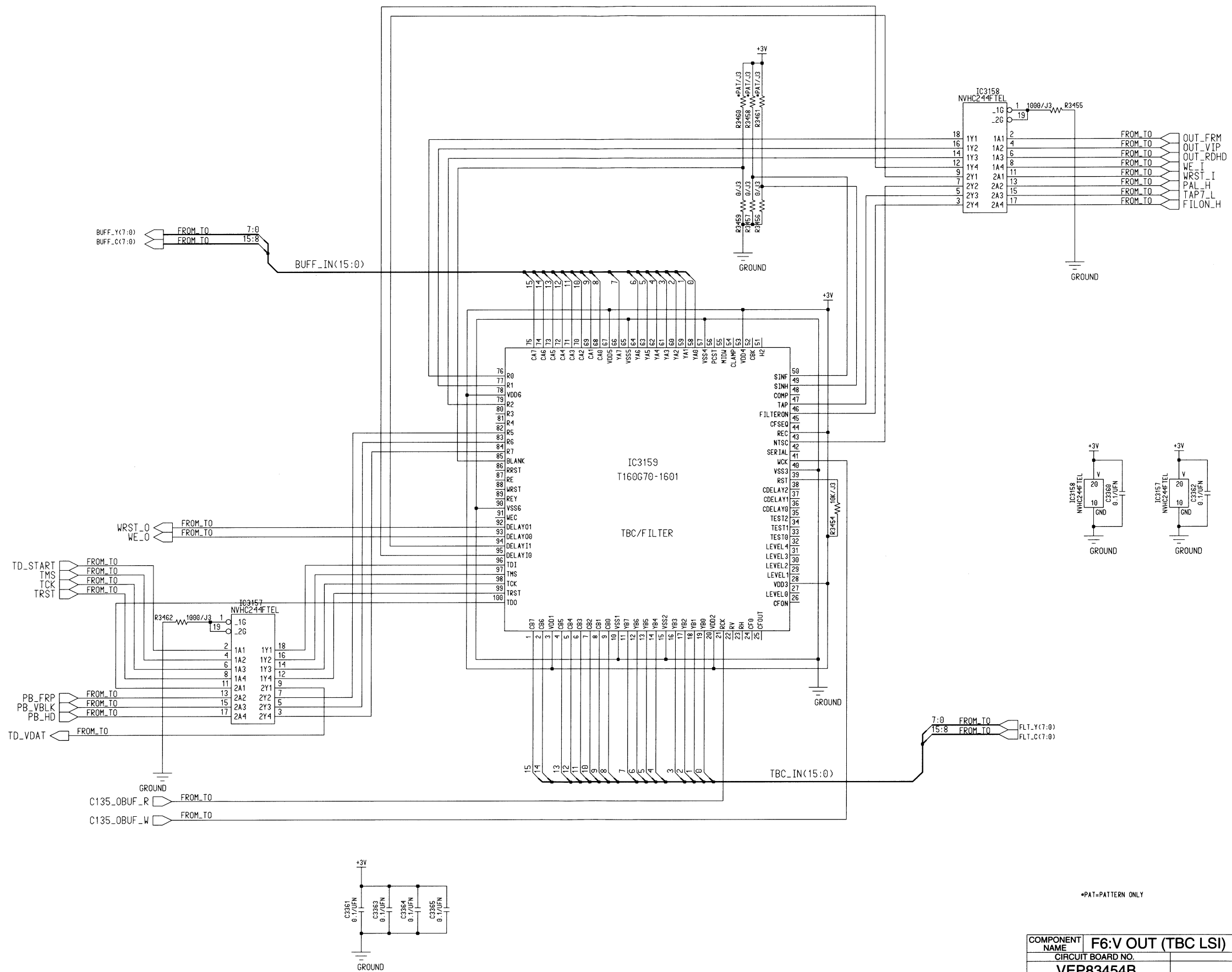
KR3W40(12/44)



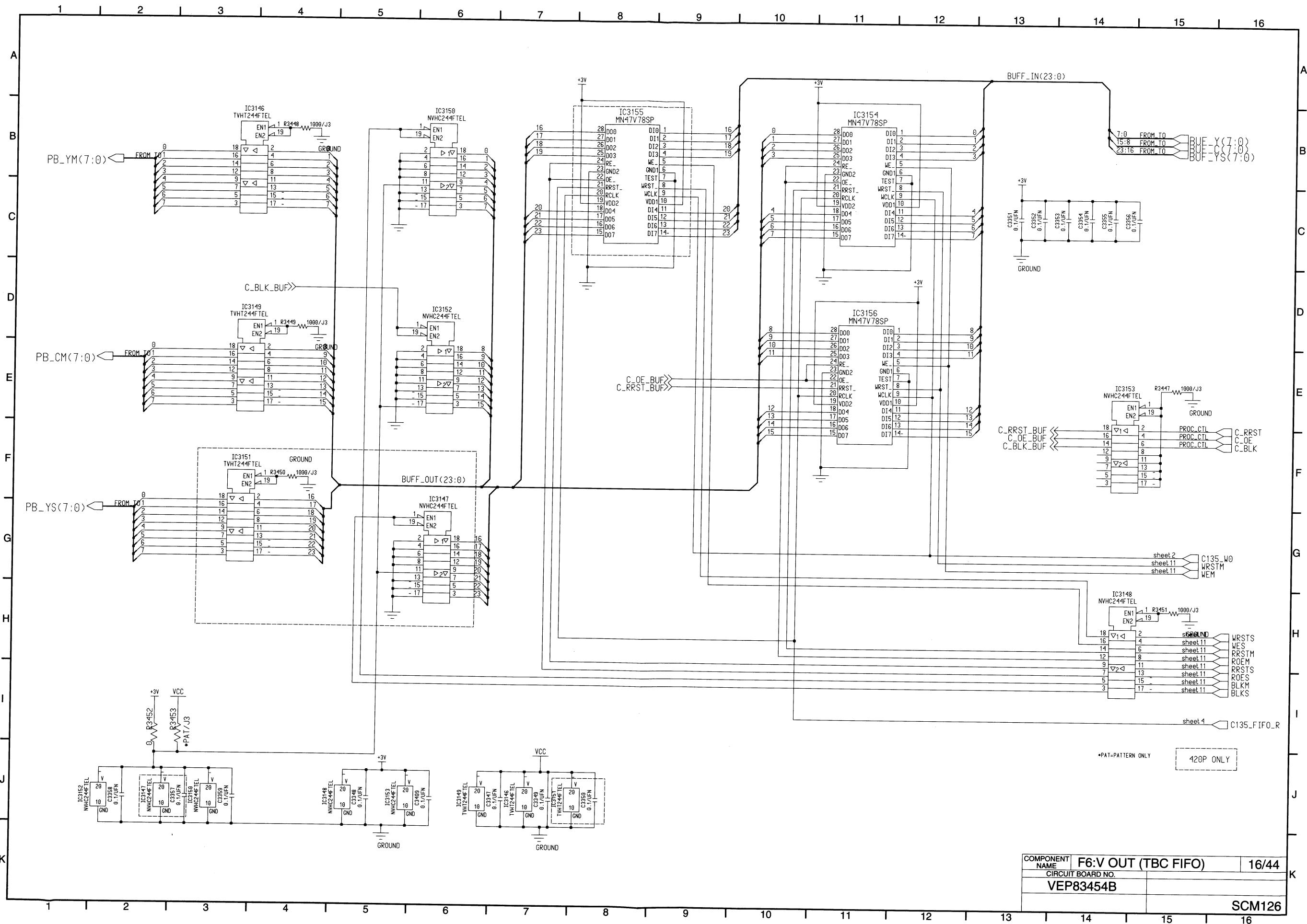
COMPONENT NAME	F6:V OUT(COMB)	13/44
CIRCUIT BOARD NO.		
VEP83454B		
SCM123		



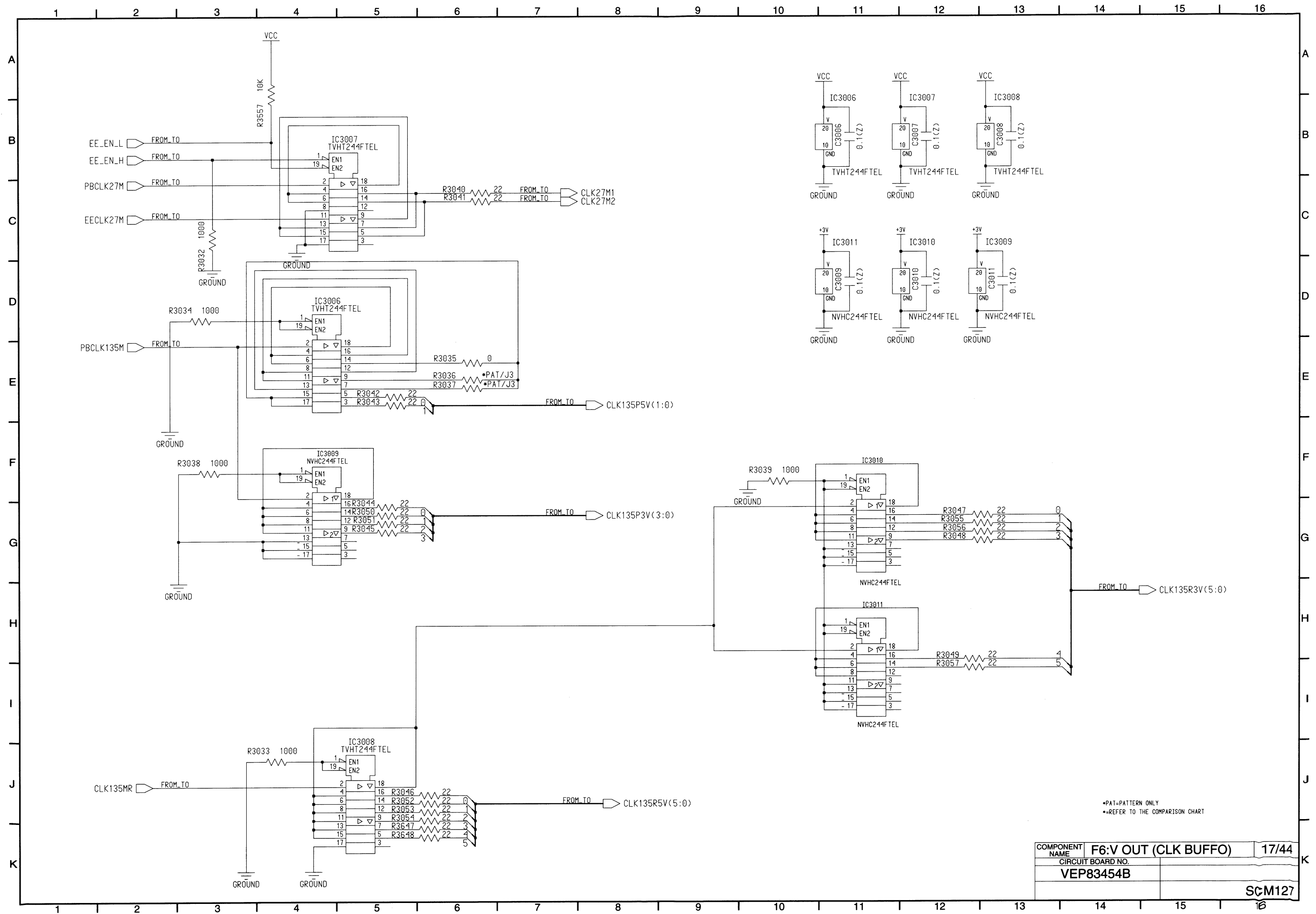
KF3W40(15/44)

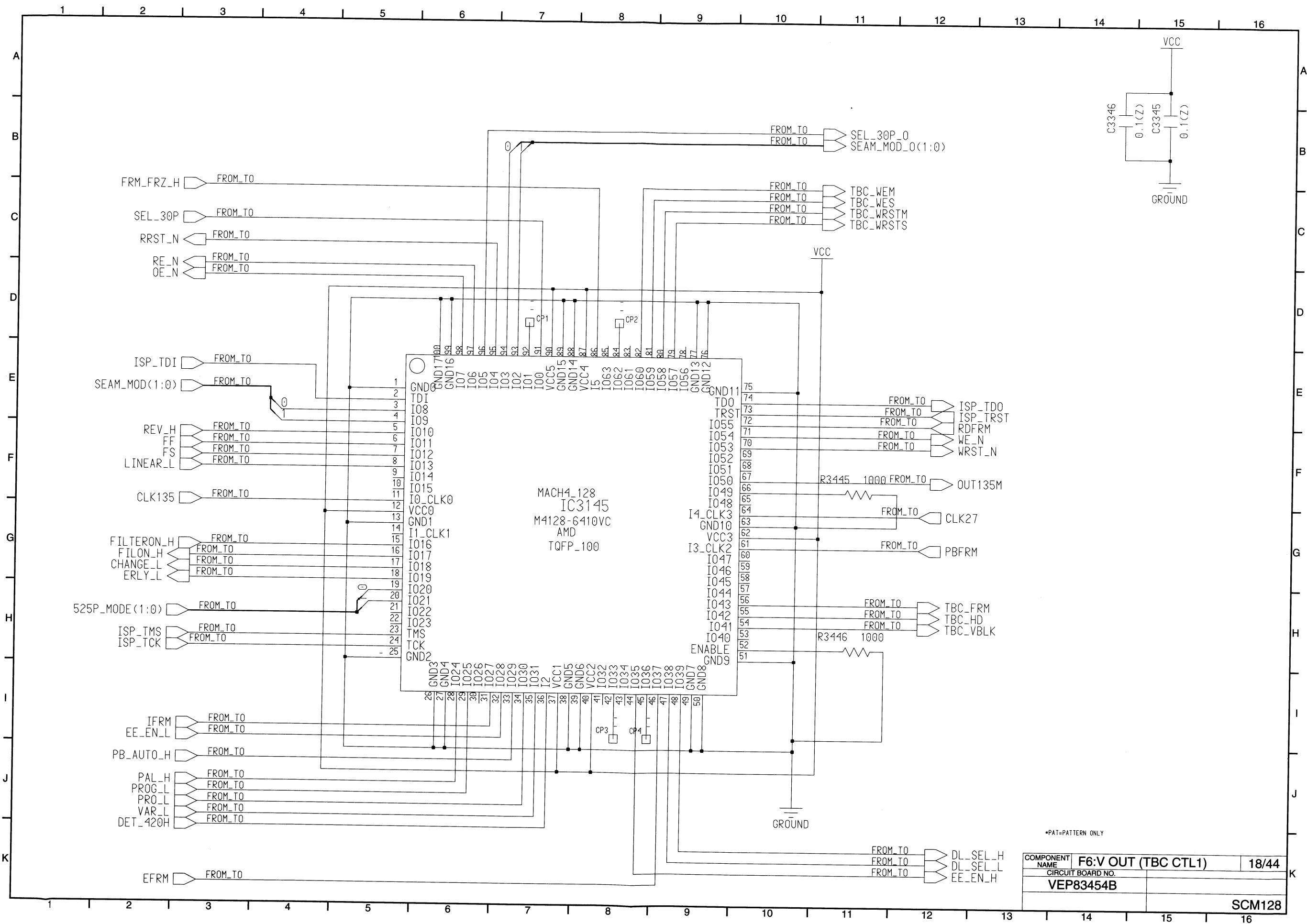


COMPONENT NAME	F6:V OUT (TBC LSI)	15/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM125



KR3W40(17/44)



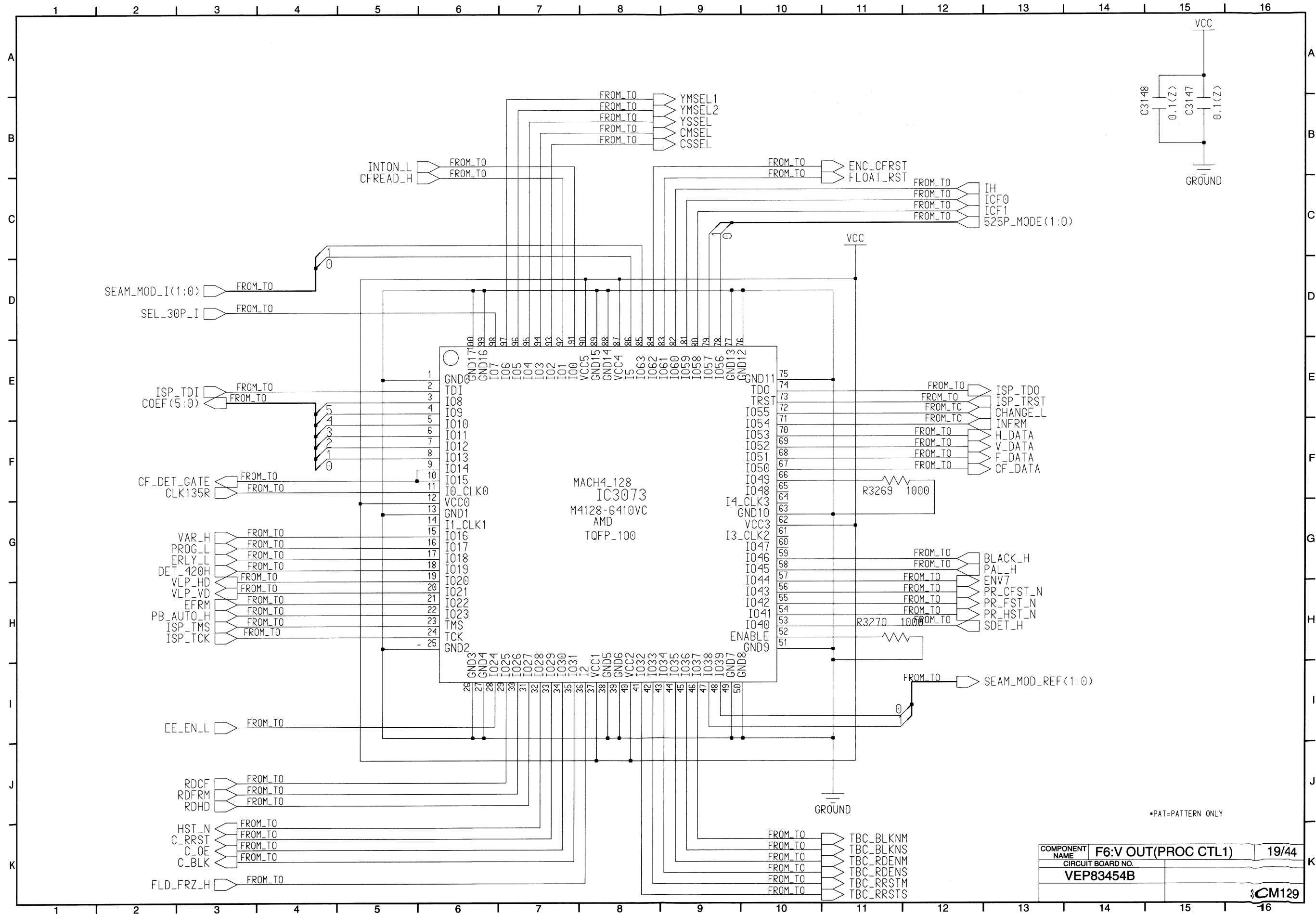


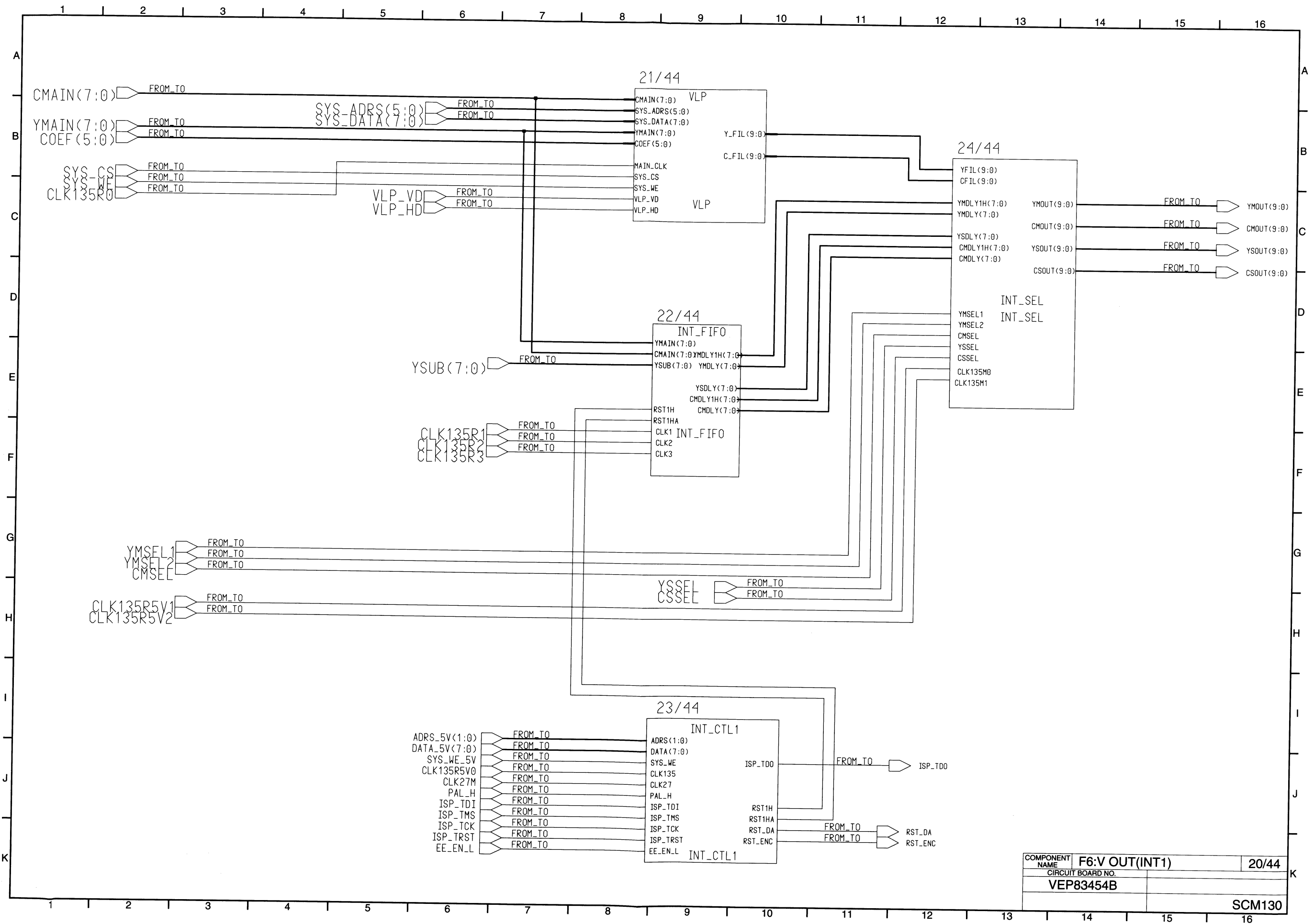
*PAT= PATTERN ONLY

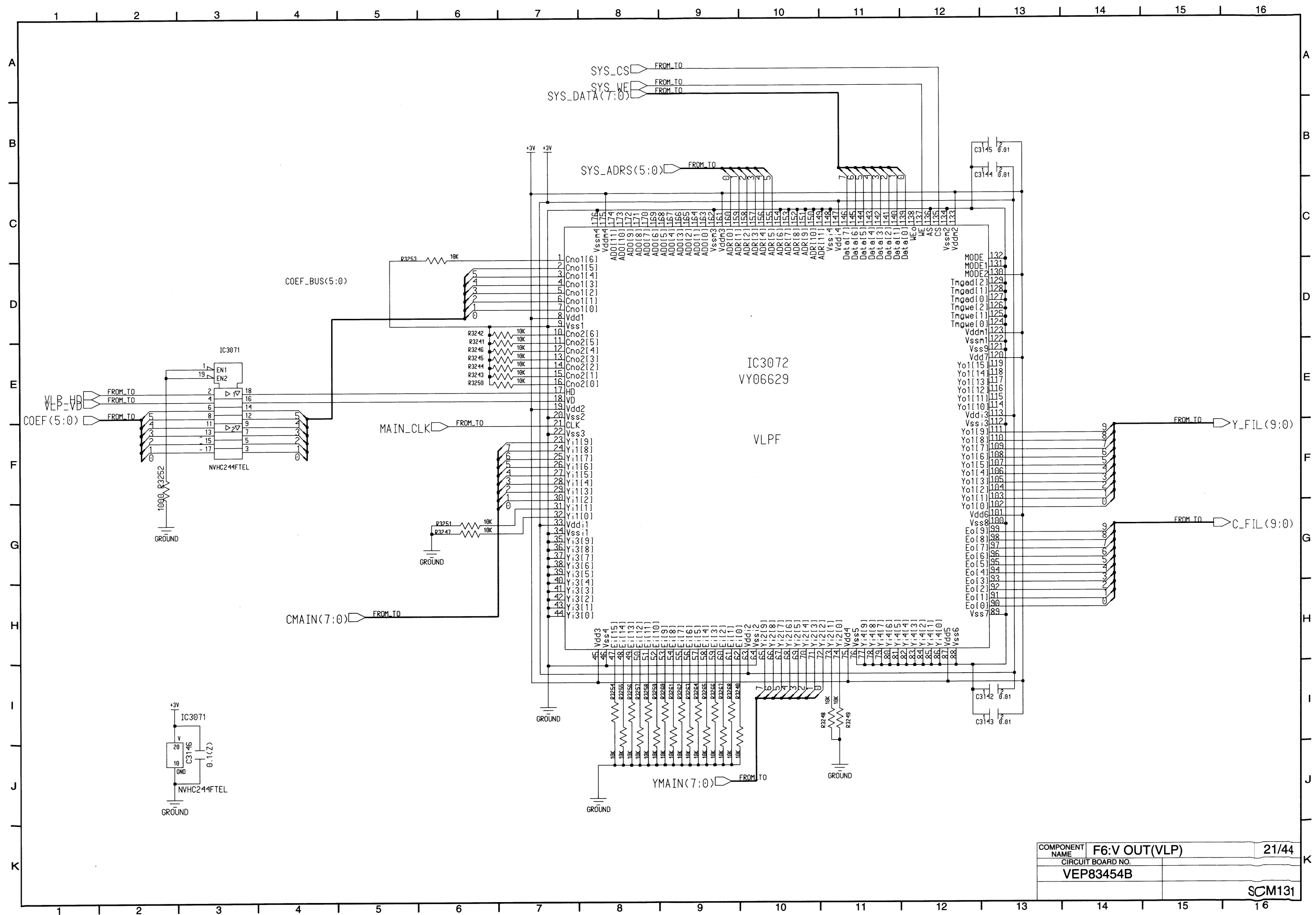
COMPONENT NAME	F6:V OUT (TBC CTL1)	18/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM128

KF3W40(18/44)

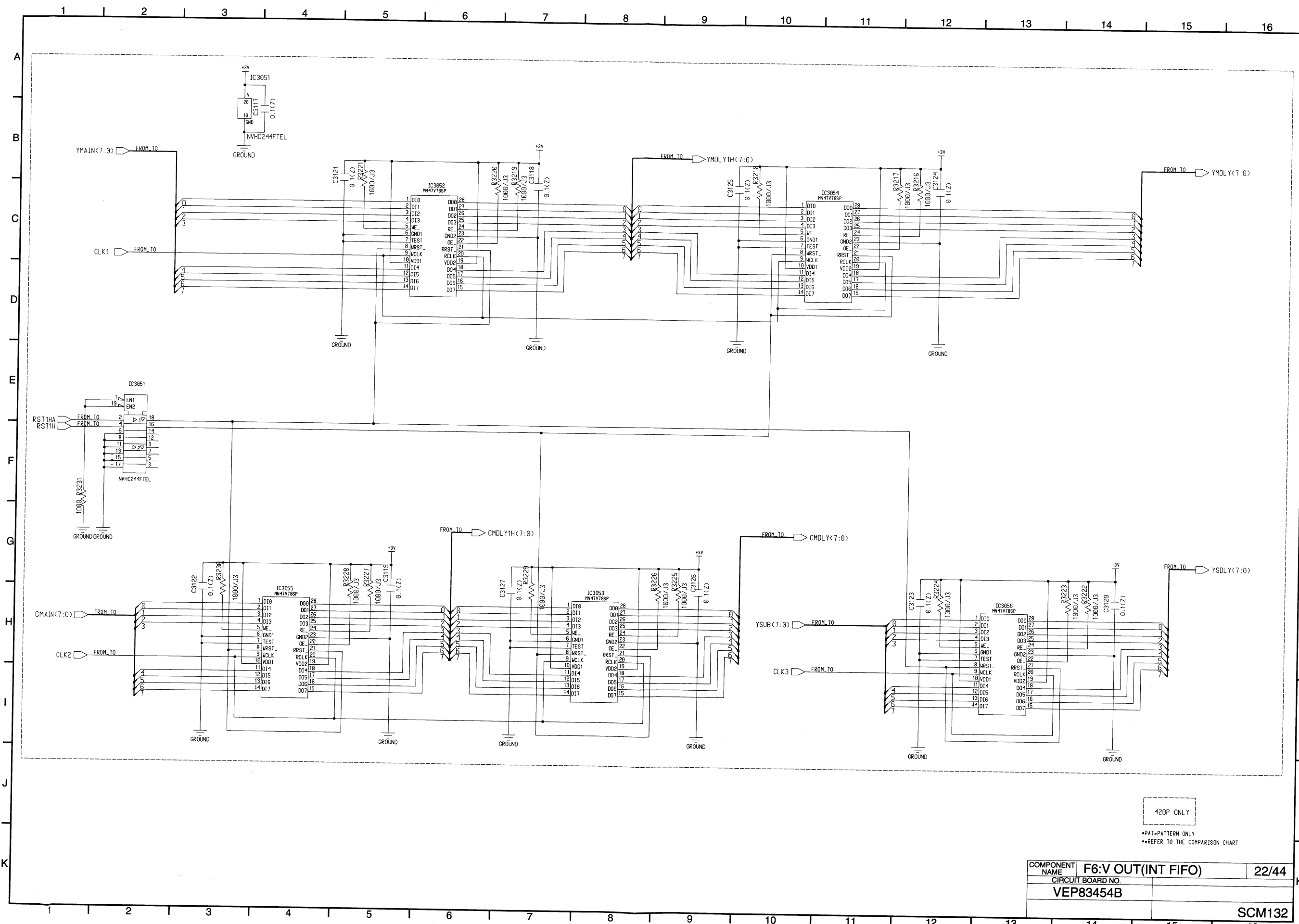
KR3W40(19/44)







COMPONENT NAME	F6:V OUT(VLP)	21/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM131

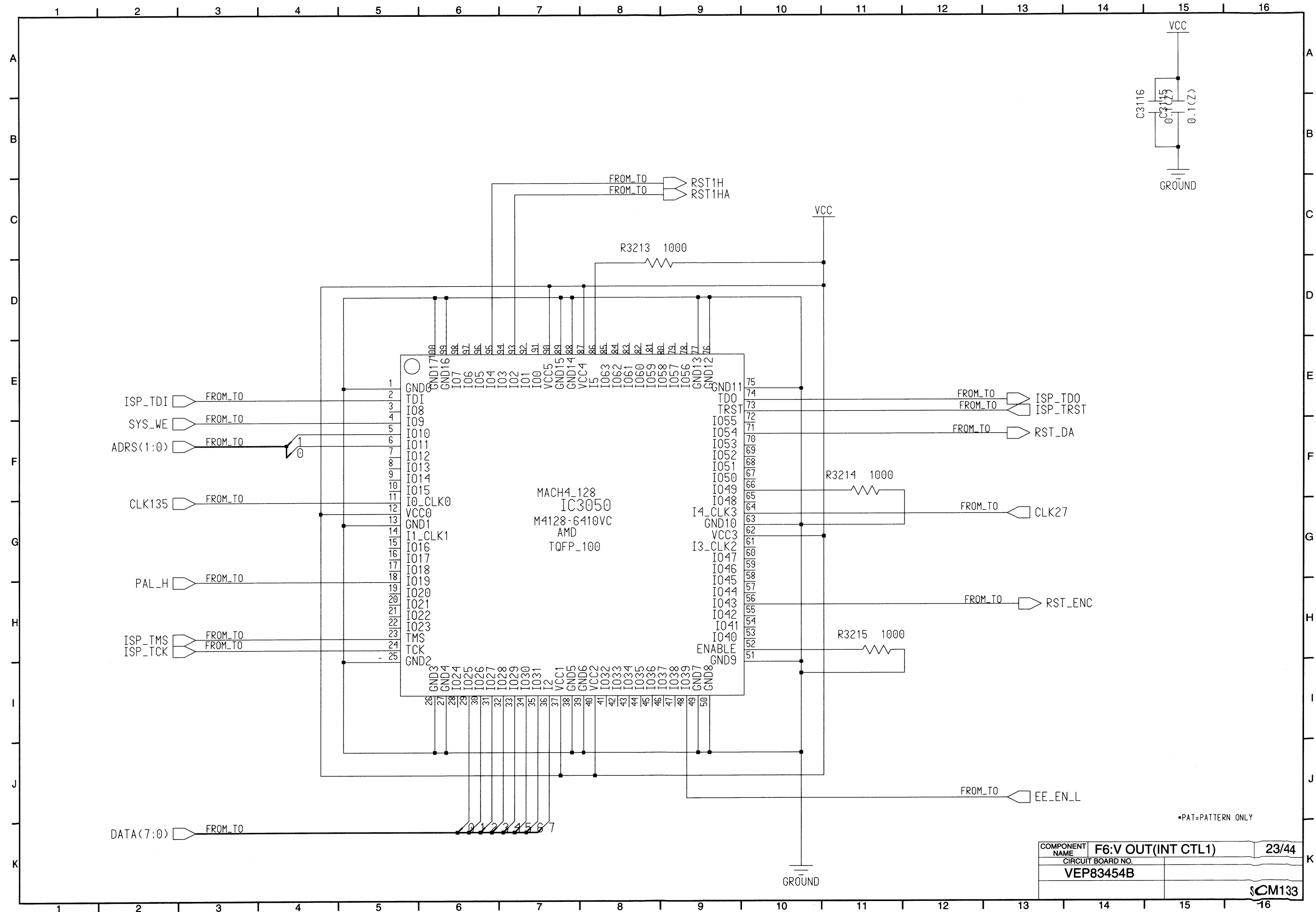


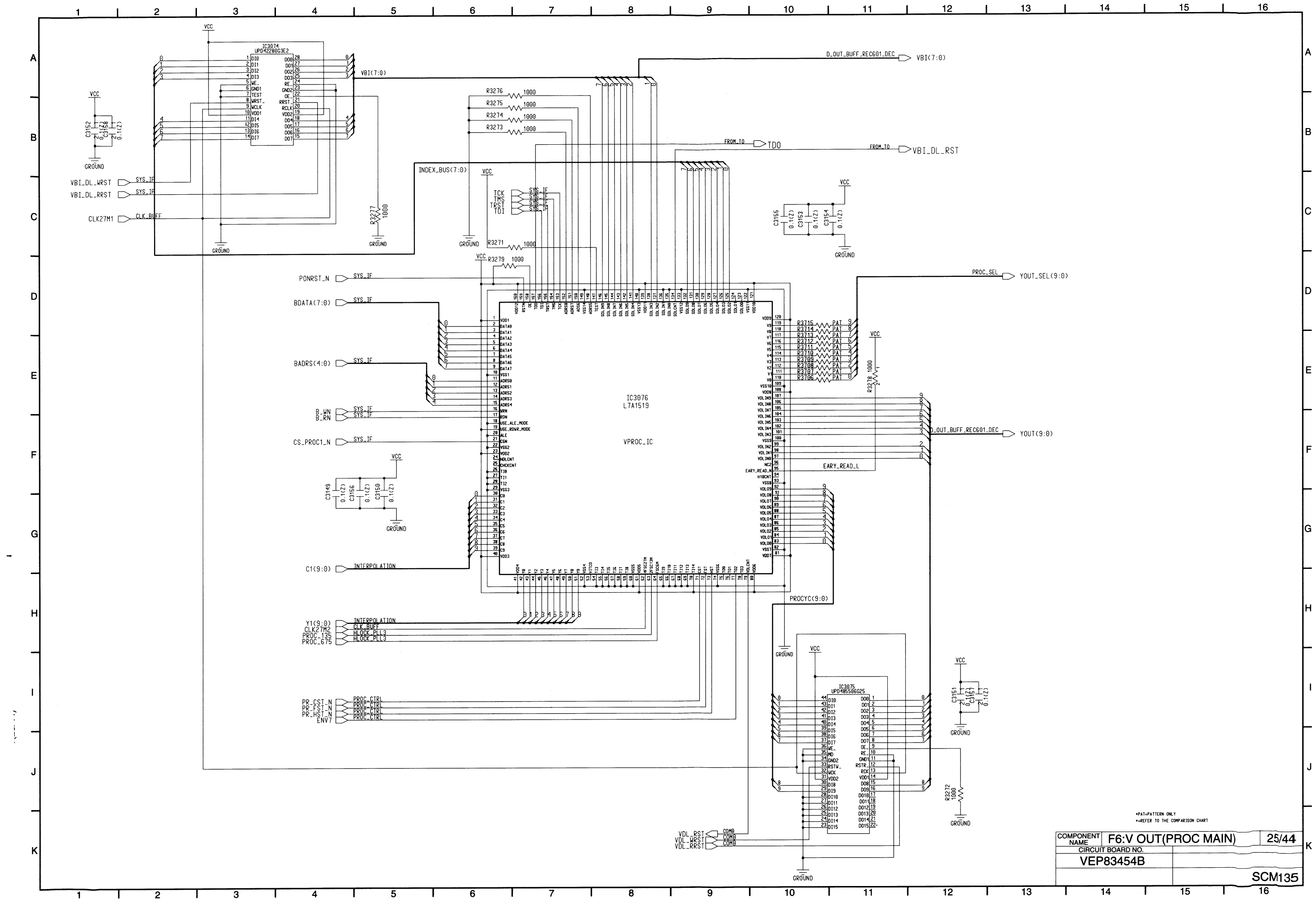
420P ONLY
*PAT= PATTERN ONLY
**REFER TO THE COMPARISON CHART

COMPONENT NAME	F6:V OUT(INT FIFO)	22/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM132

KR3W40(22/44)

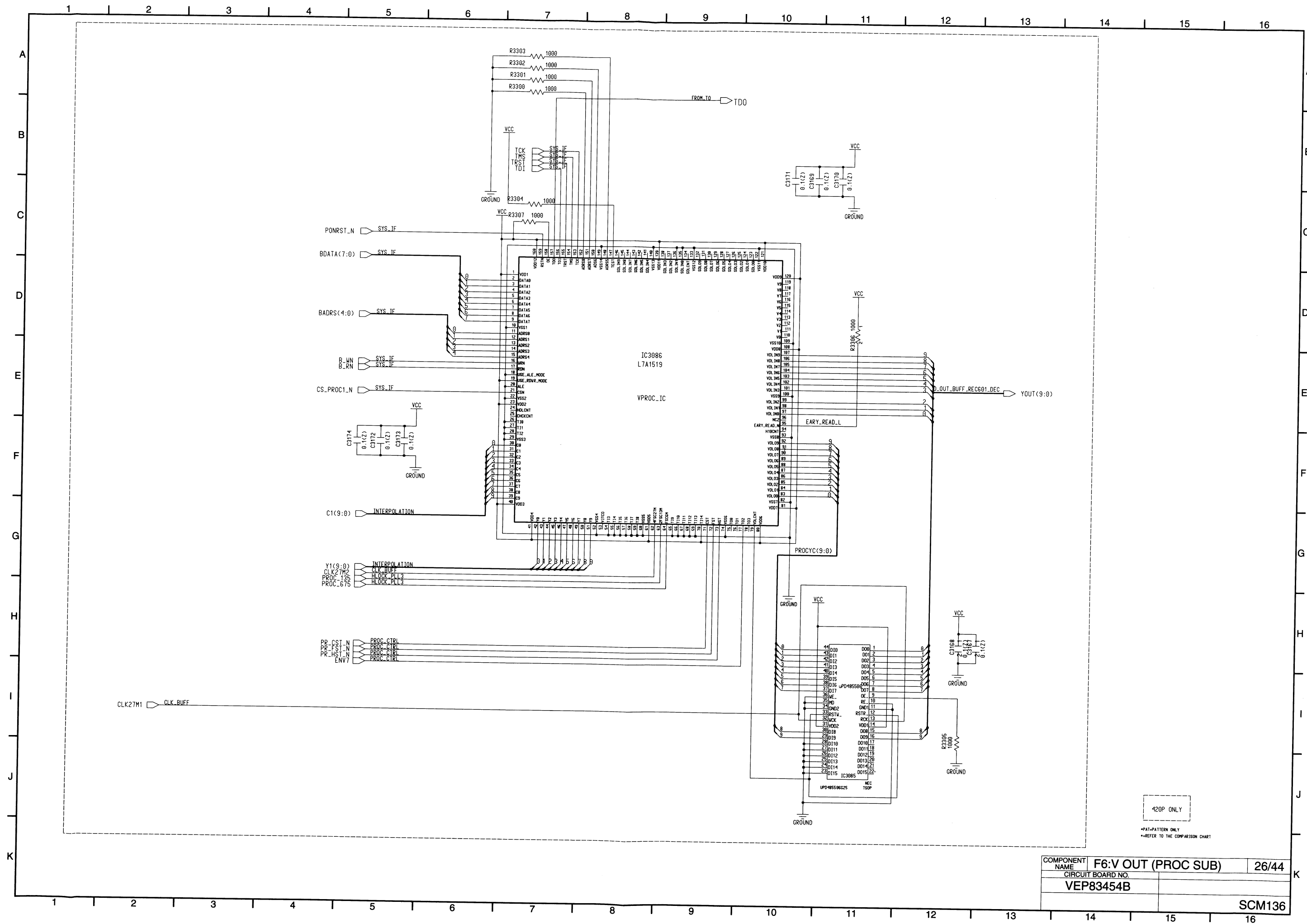
KR3W40(23/44)





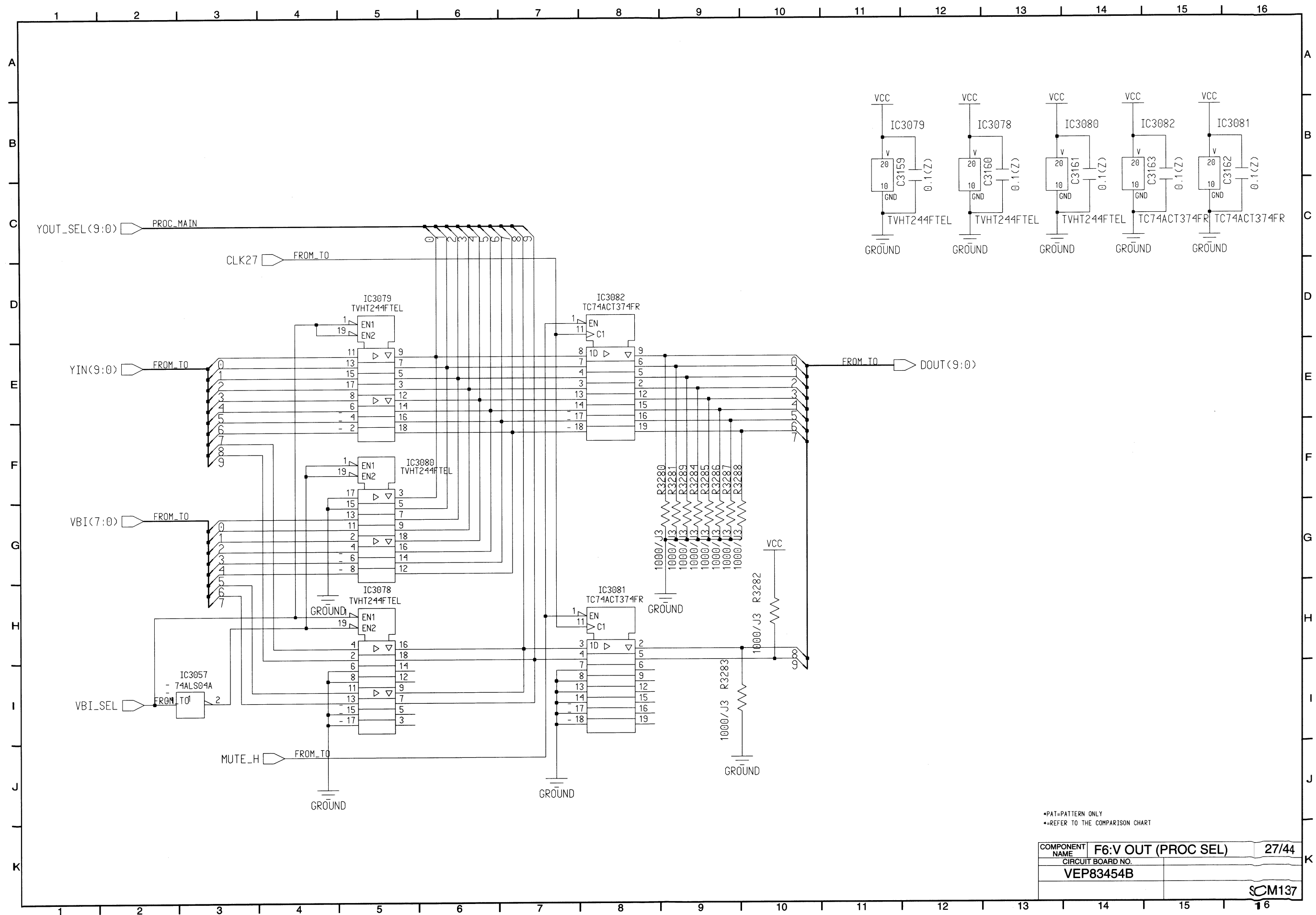
*PAT+PATTERN ONLY
**REFER TO THE COMPARISON CHART

COMPONENT NAME	F6:V OUT (PROC MAIN)	25/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM135



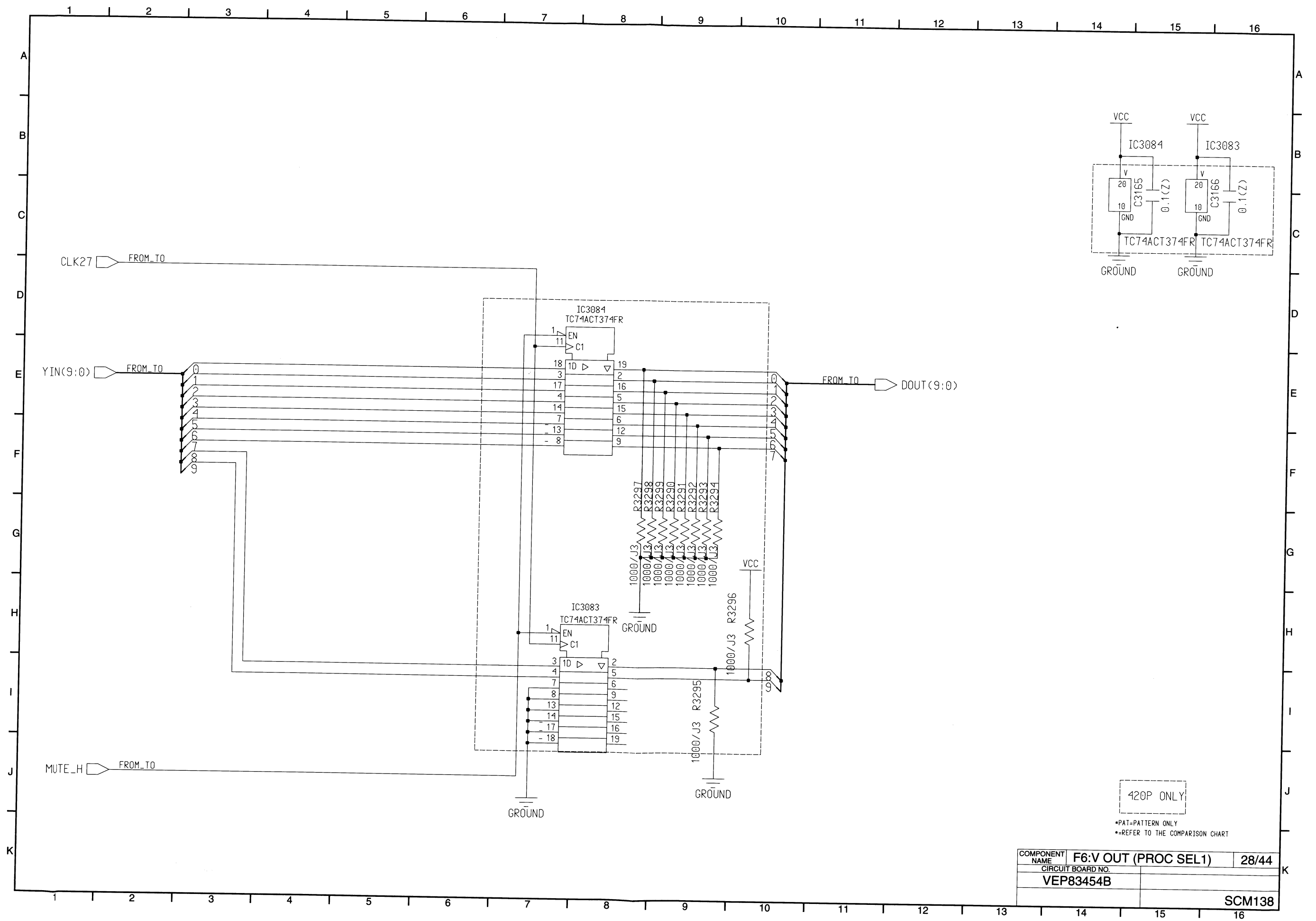
COMPONENT NAME	F6:V OUT (PROC SUB)	26/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM136

KR3W40(27/44)

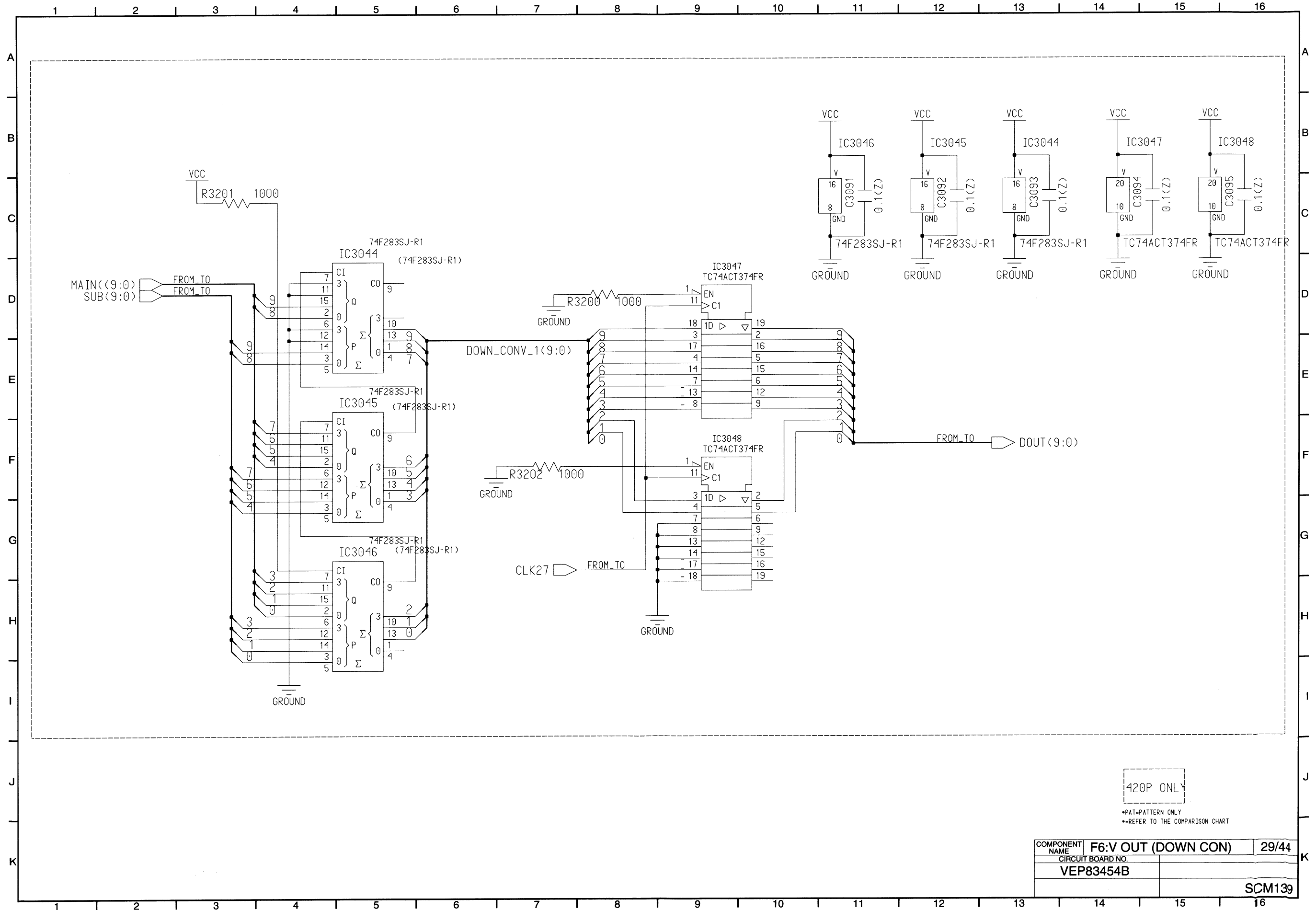


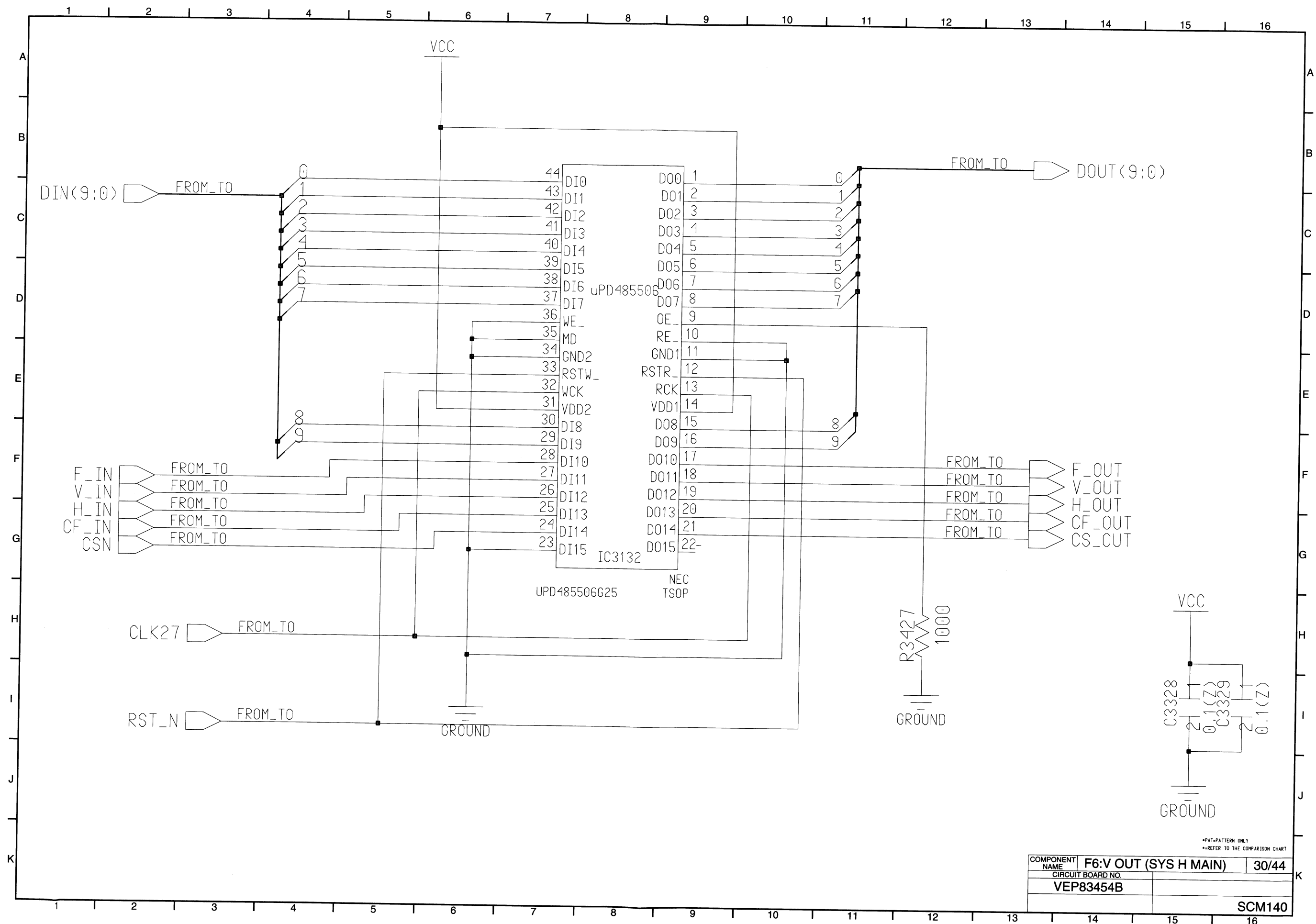
*PAT=PATTERN ONLY
**REFER TO THE COMPARISON CHART

COMPONENT NAME	F6:V OUT (PROC SEL)	27/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM137



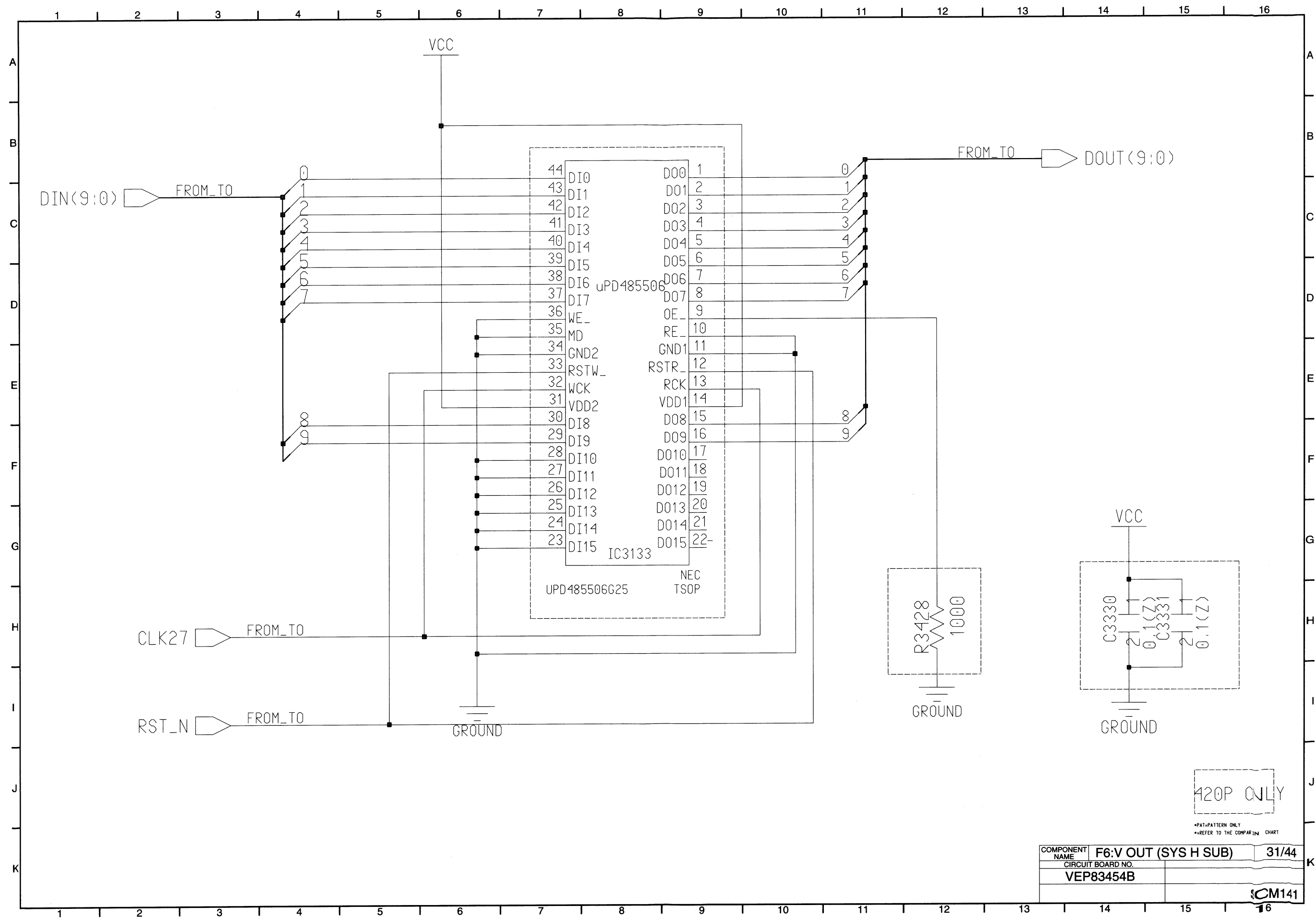
KR3W40(29/44)

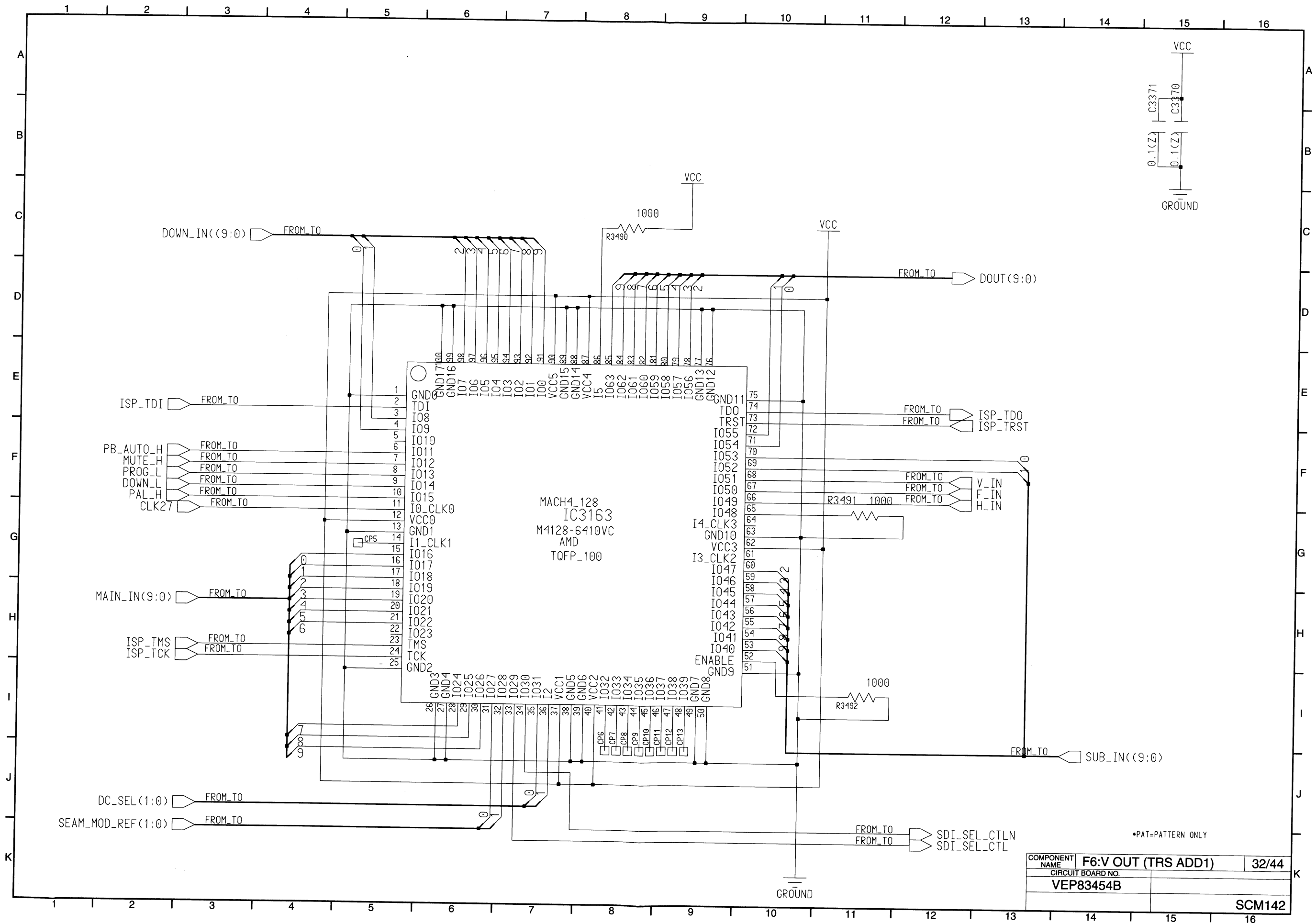




COMPONENT NAME	F6:V OUT (SYS H MAIN)	30/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM140

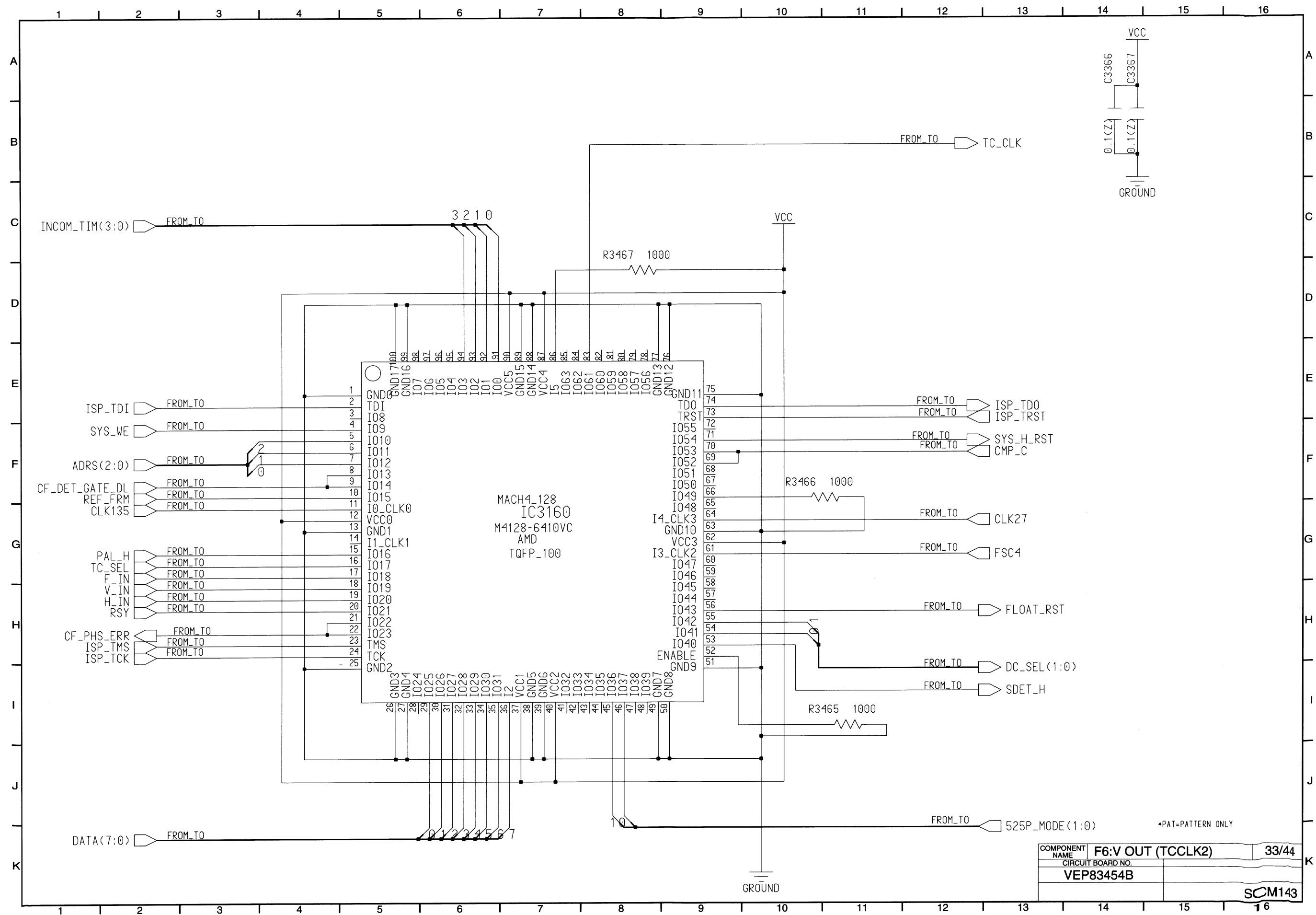
KR3W40(31/44)



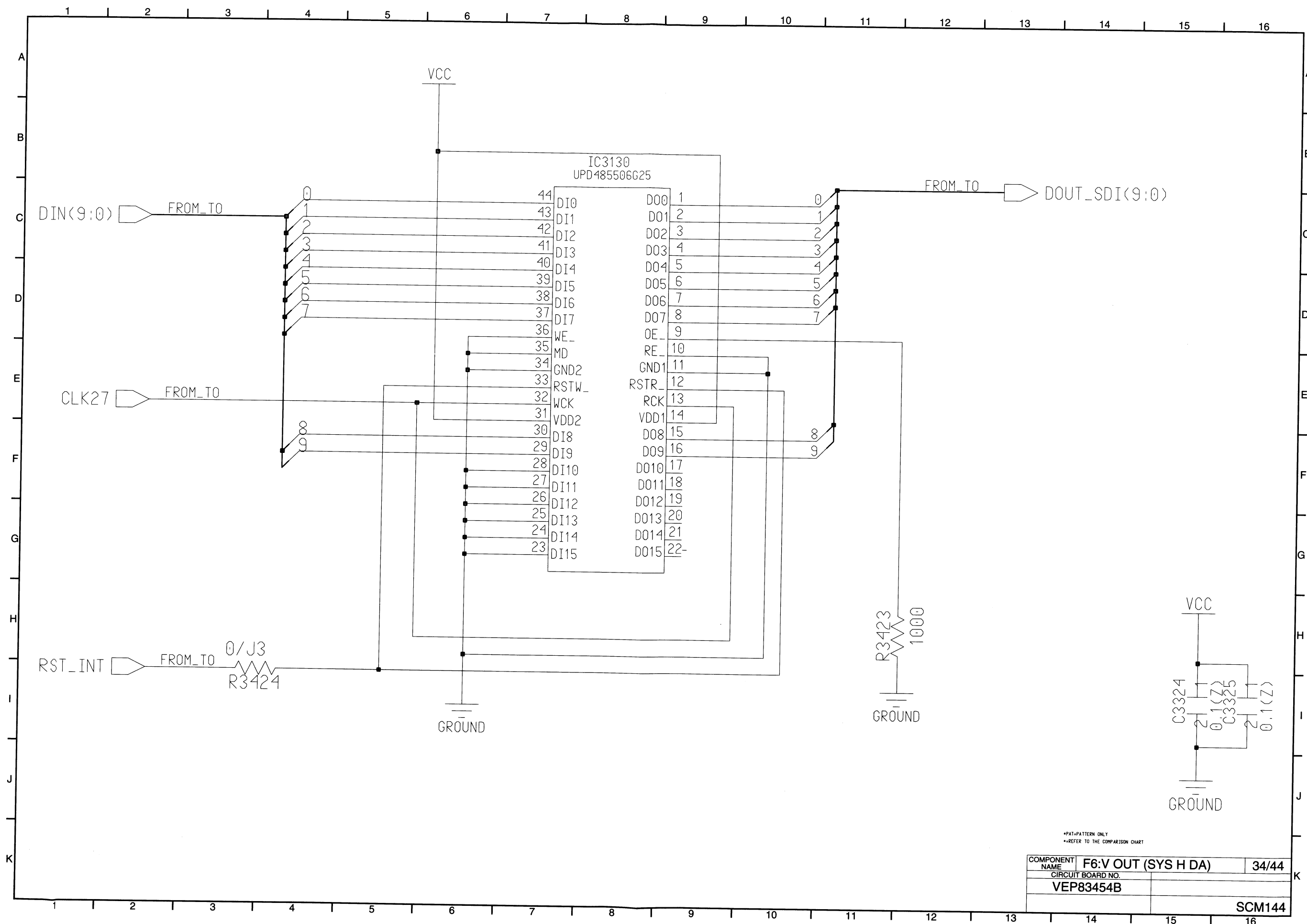


KR3W40(32/44)

KR3W40(33/44)



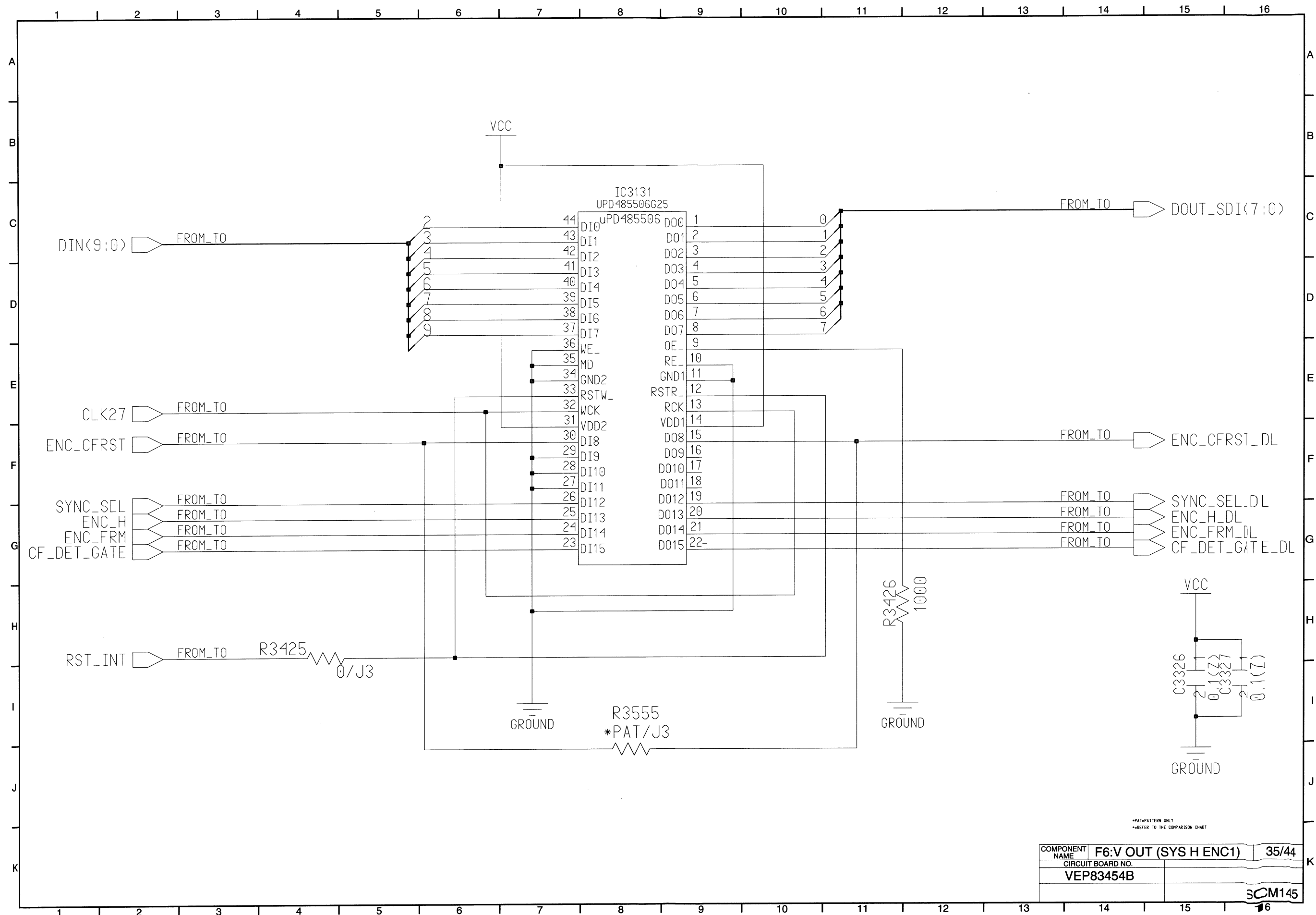
COMPONENT NAME	F6:V OUT (TCCLK2)	33/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM143



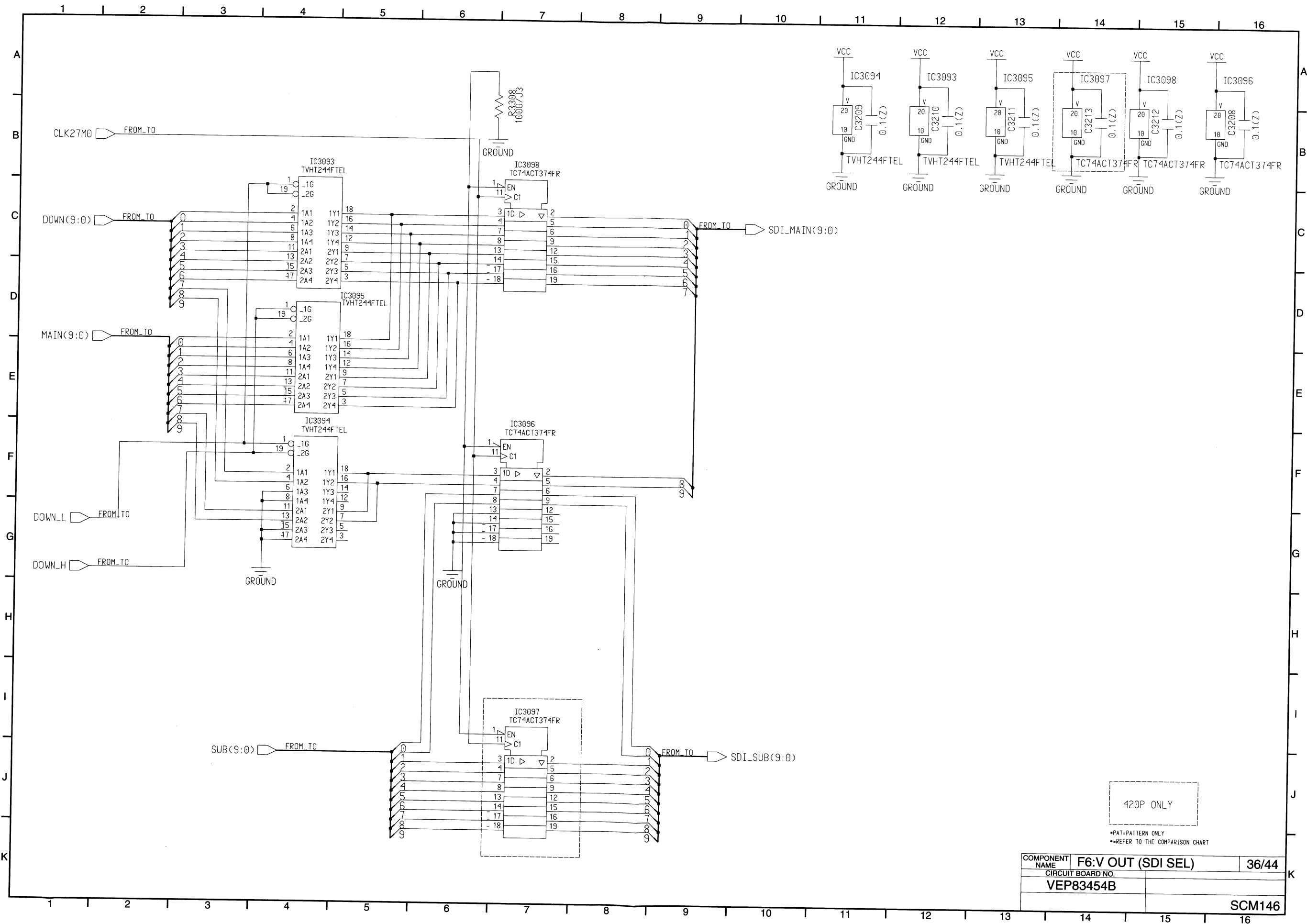
*PAT=PATTERN ONLY **REFER TO THE COMPARISON CHART		
COMPONENT NAME	F6:V OUT (SYS H DA)	34/44
CIRCUIT BOARD NO.		
VEP83454B		
	SCM144	

KR3W40(34/44)

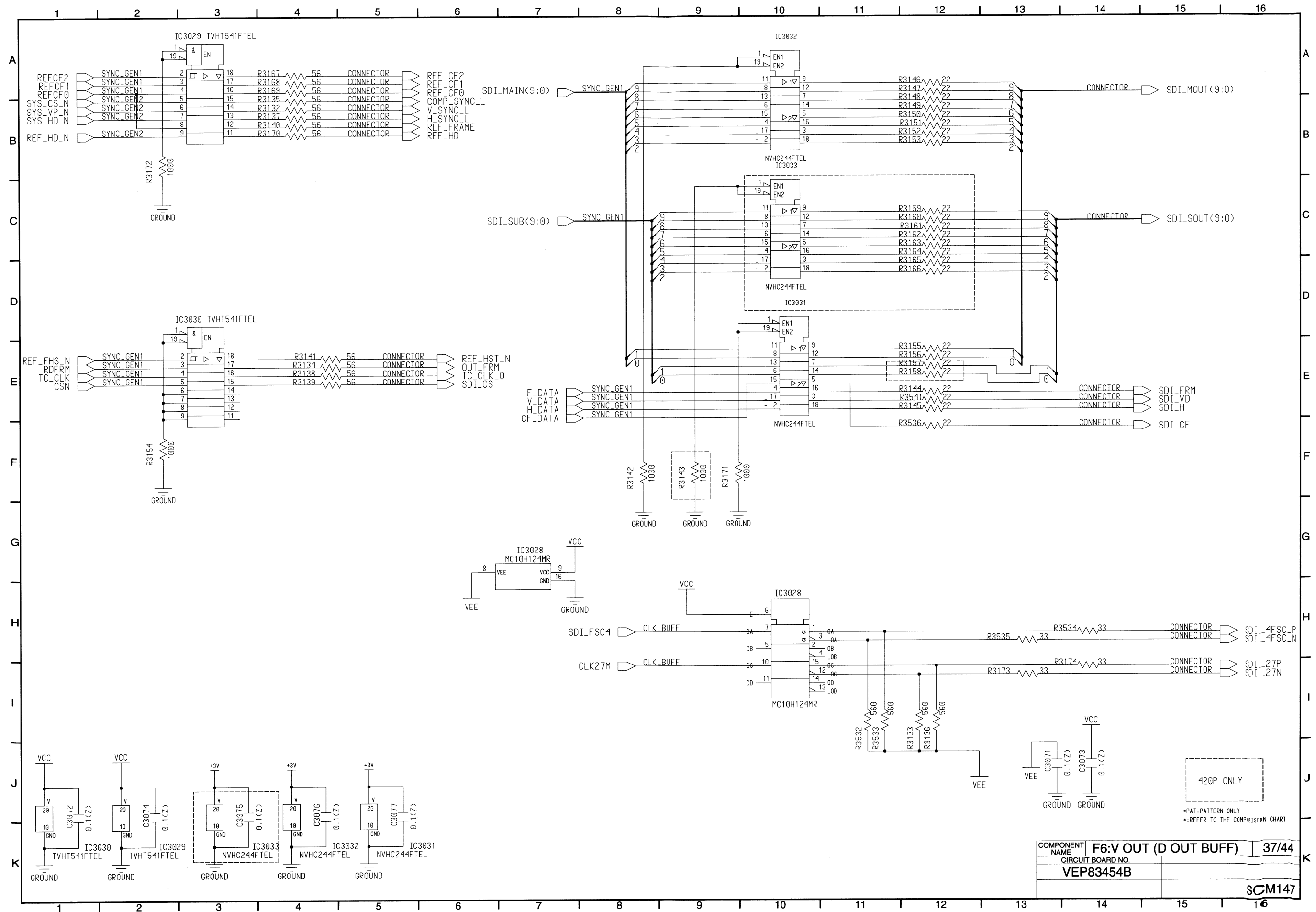
KR3W40(35/44)

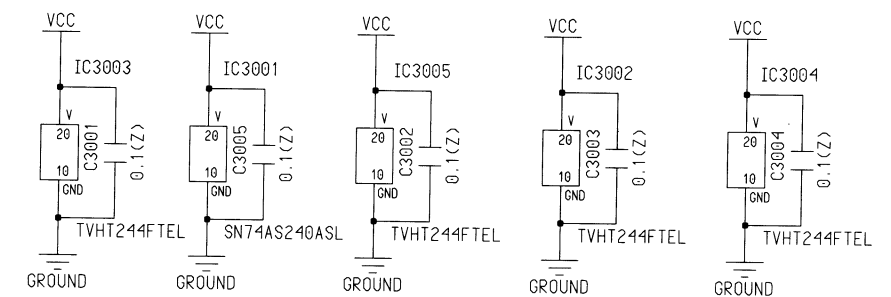
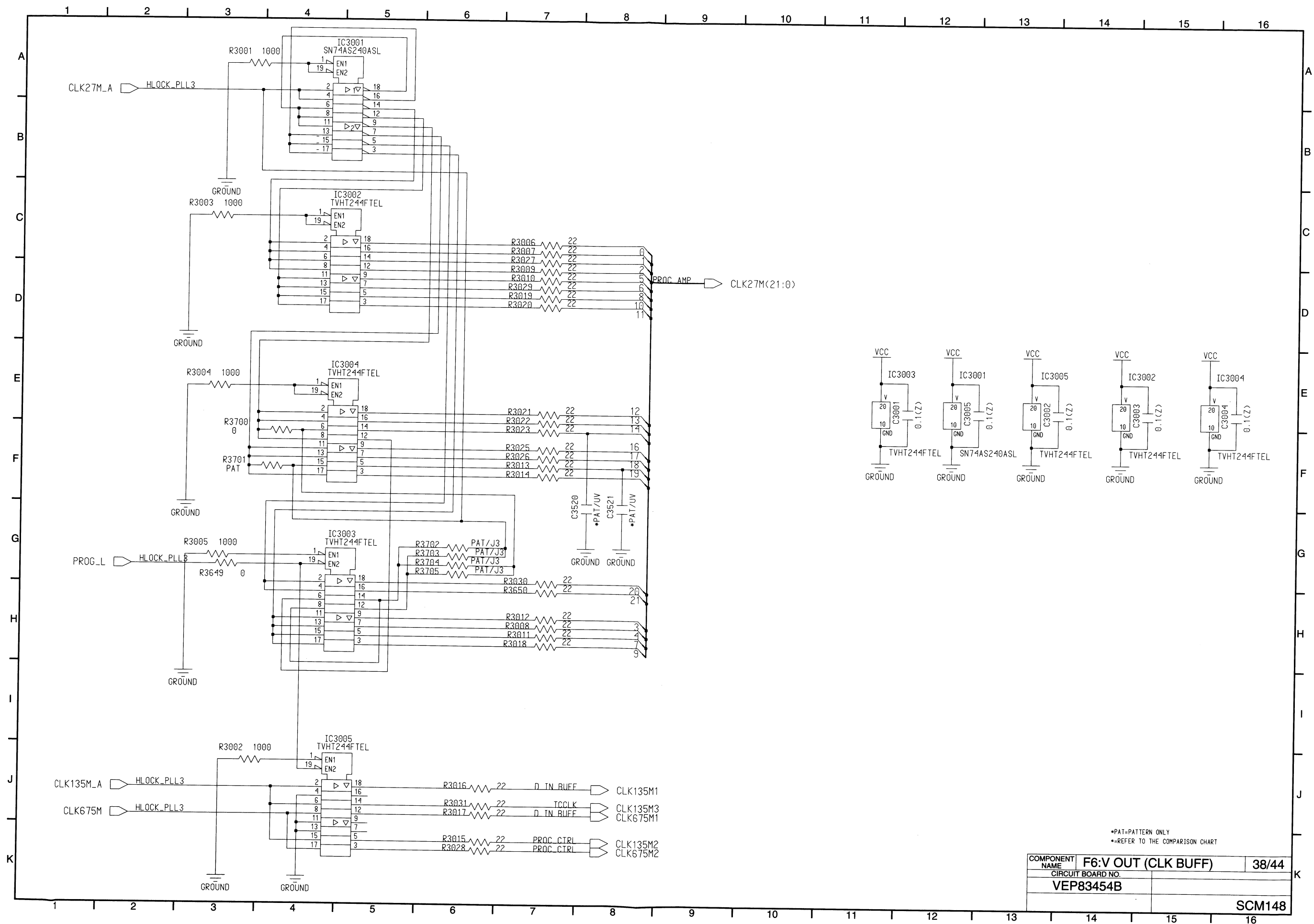


*PAT-PATTERN ONLY
**REFER TO THE COMPARISON CHART



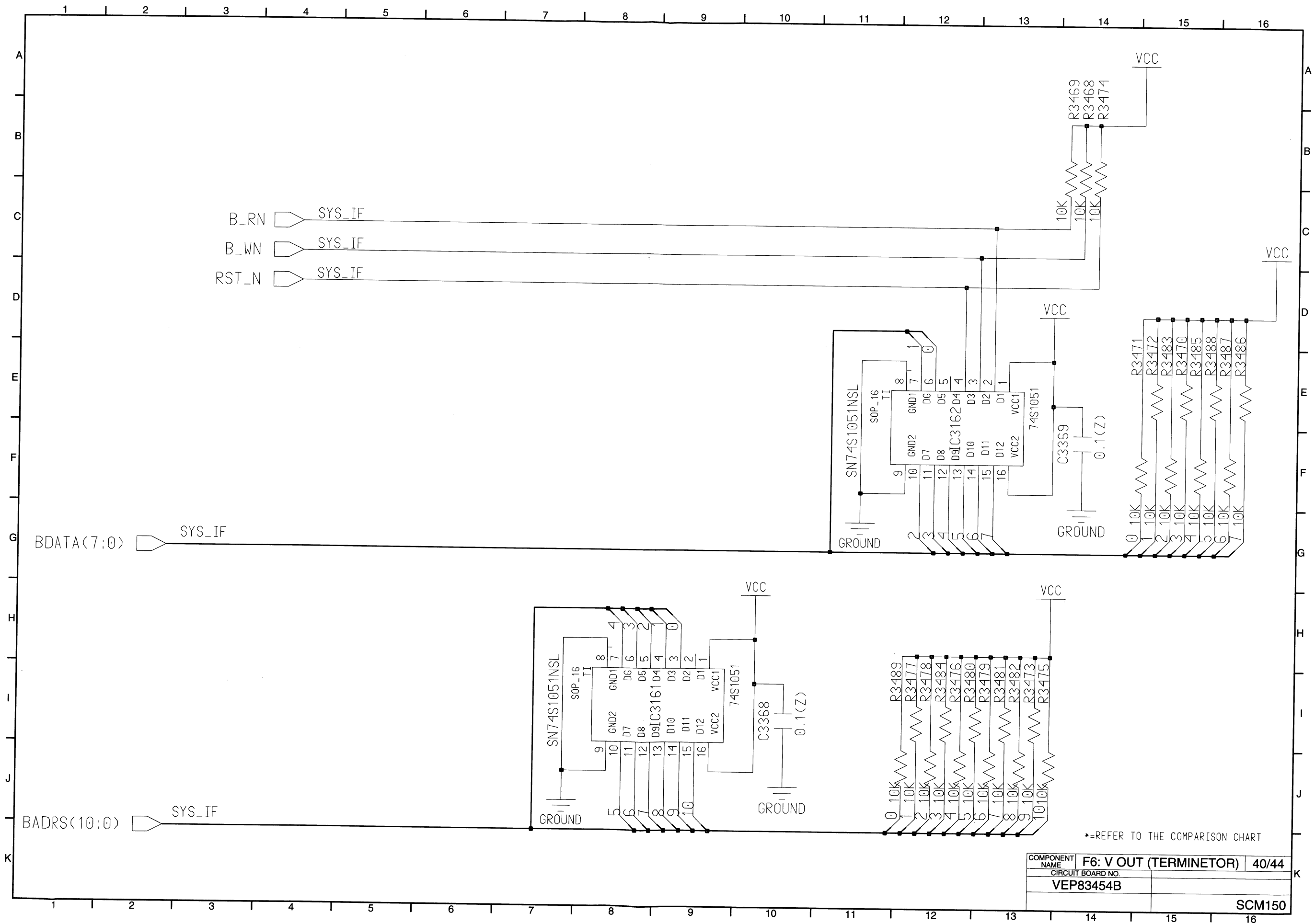
KR3W40(36/44)





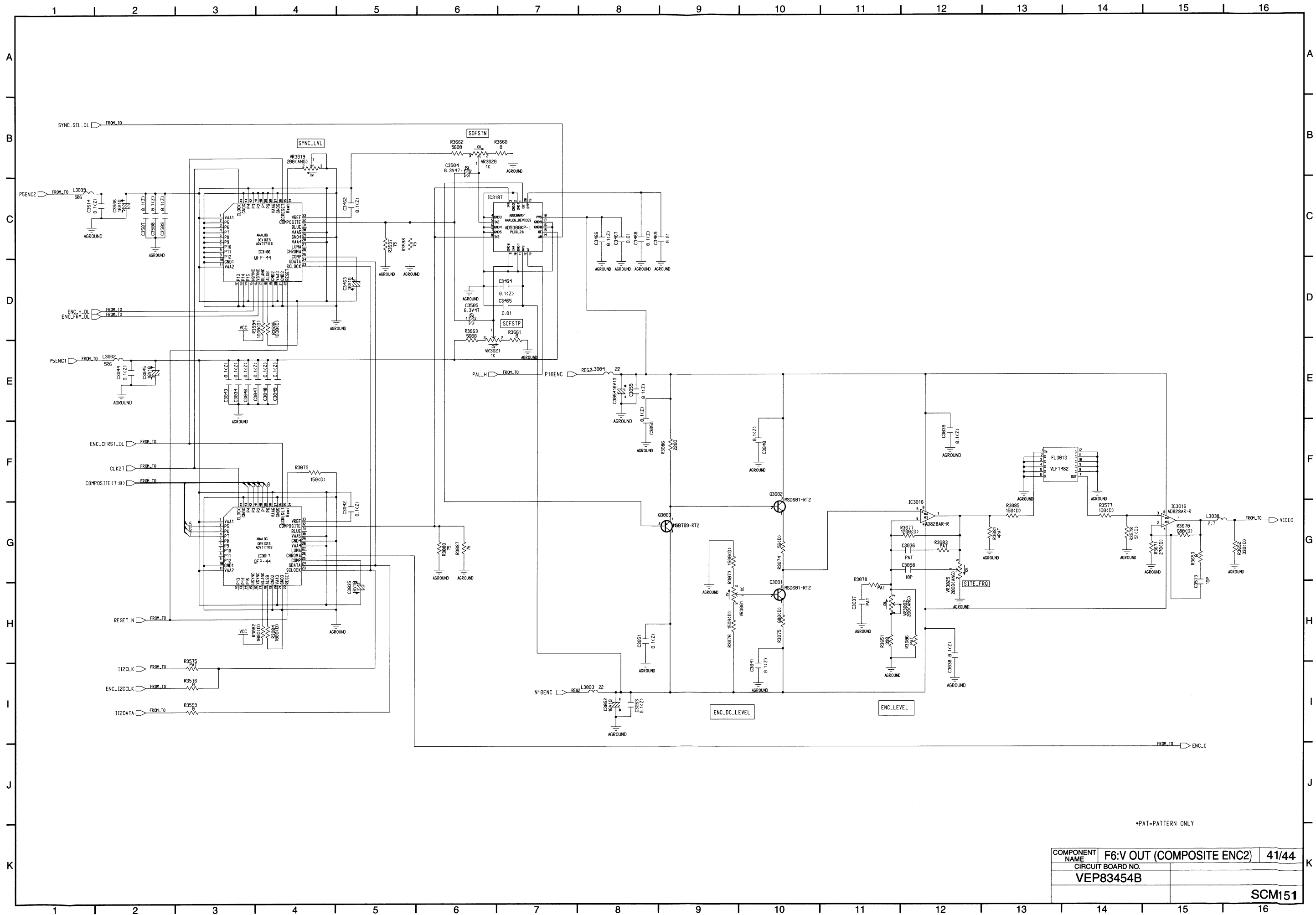
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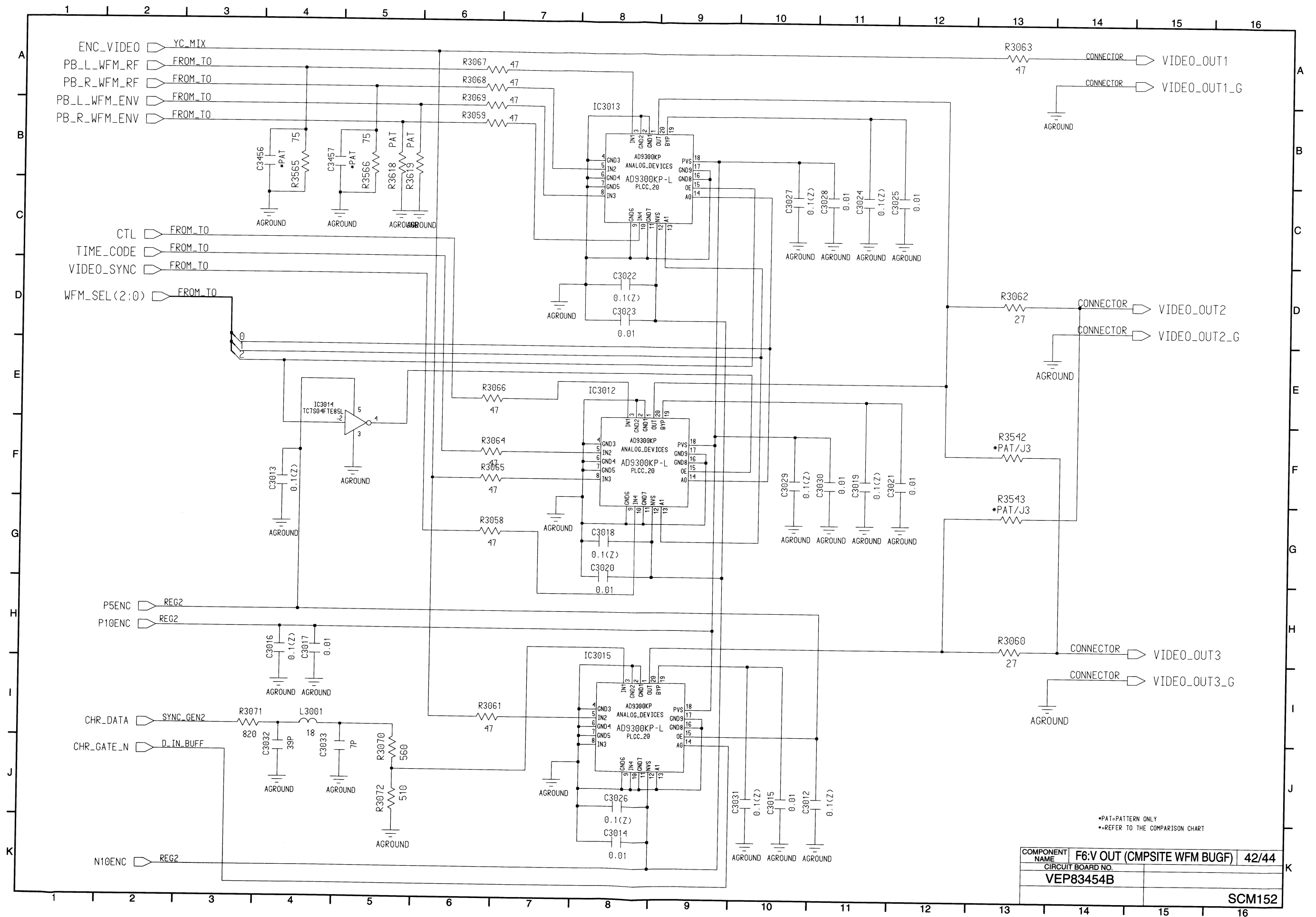




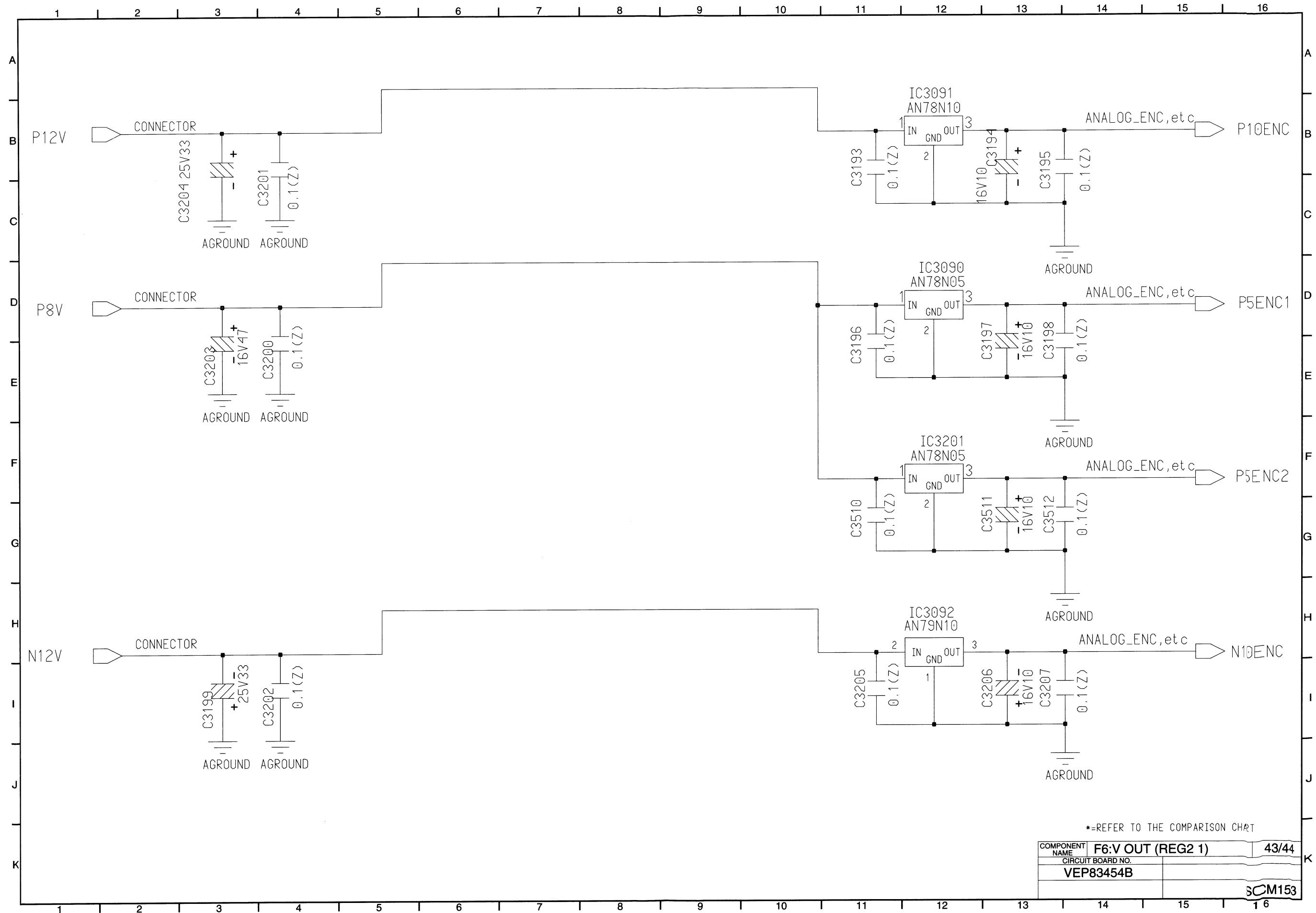
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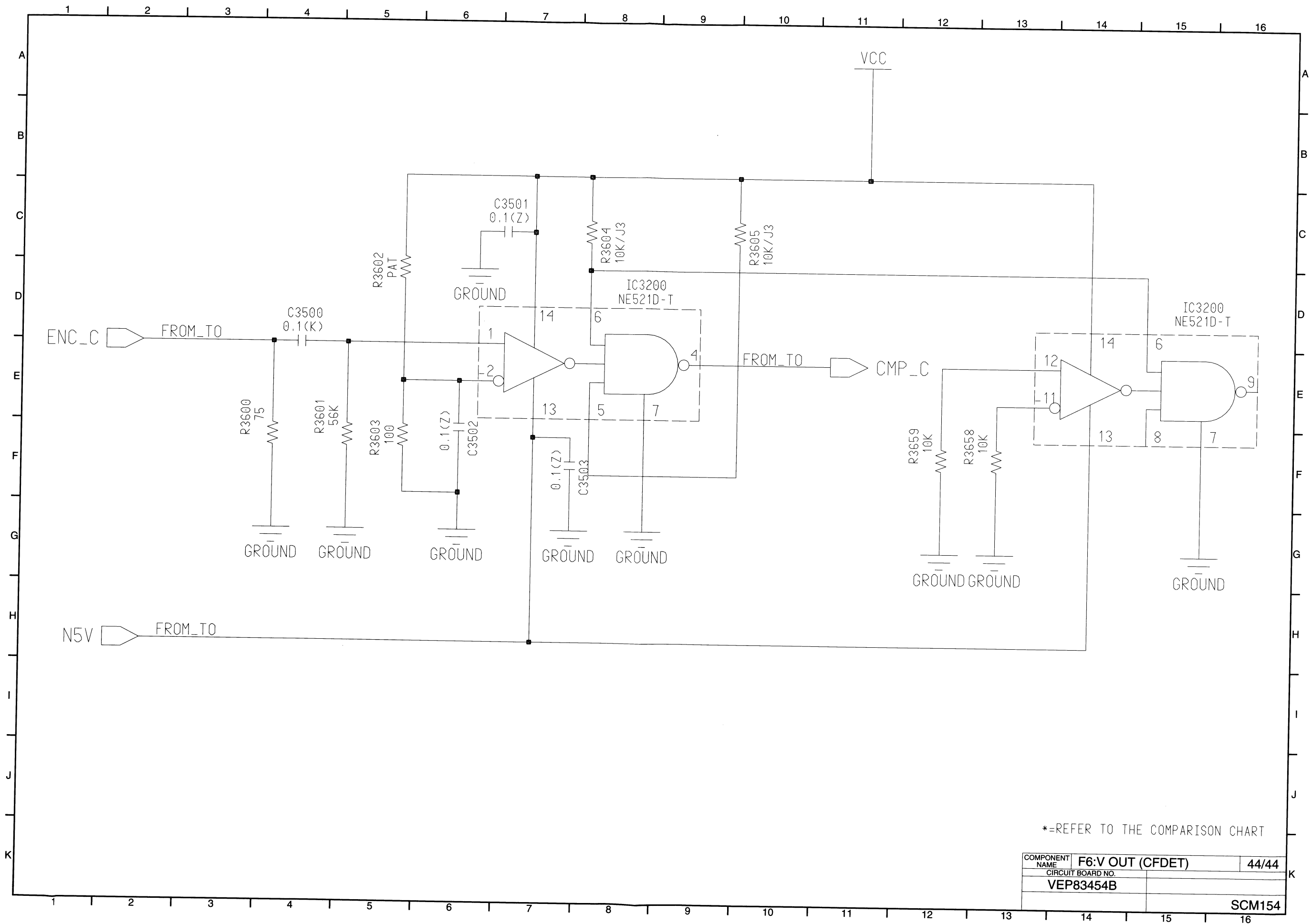
COMPONENT NAME	F6: V OUT (TERMINATOR)	40/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM150





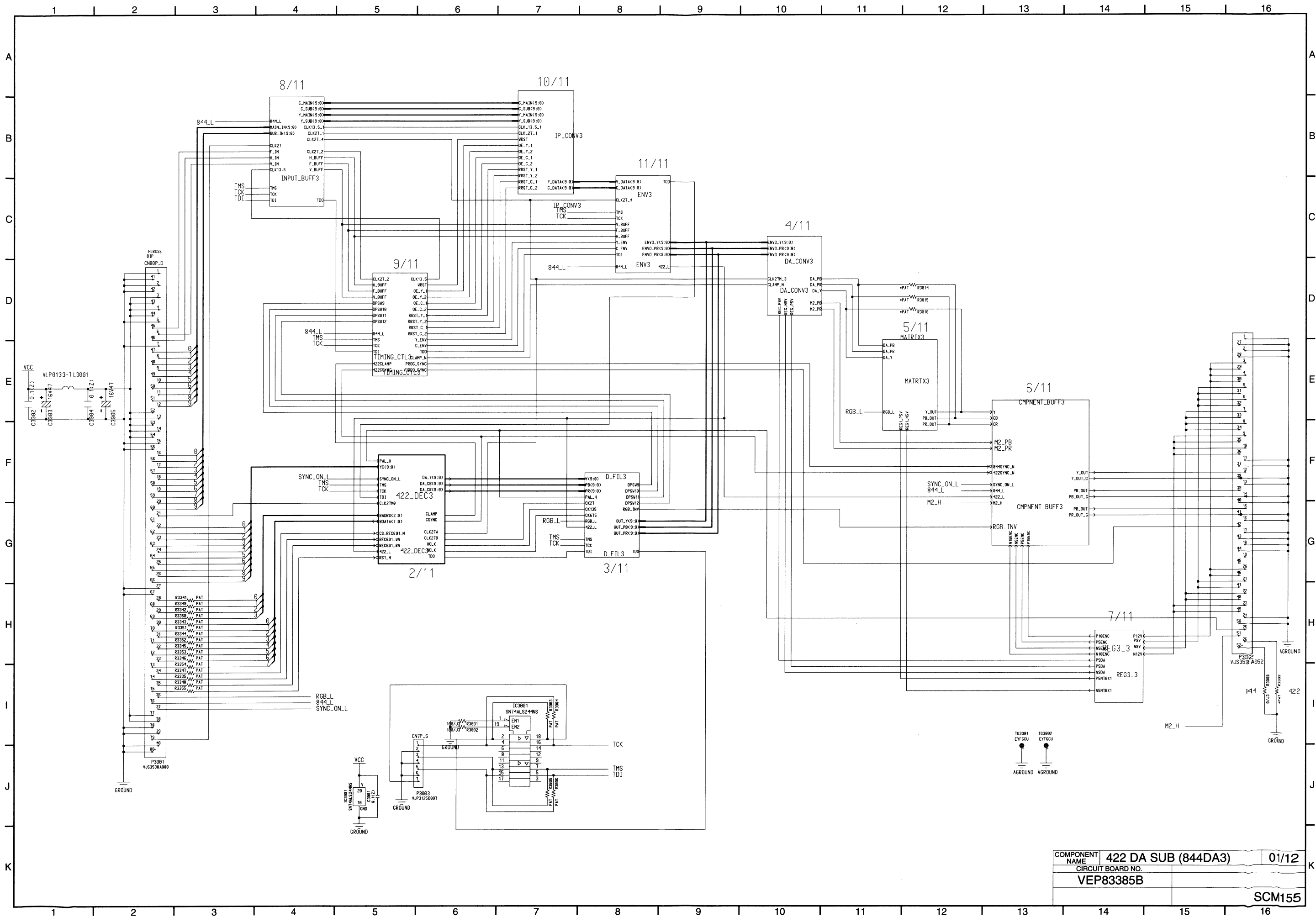
KF83W40(43/44)



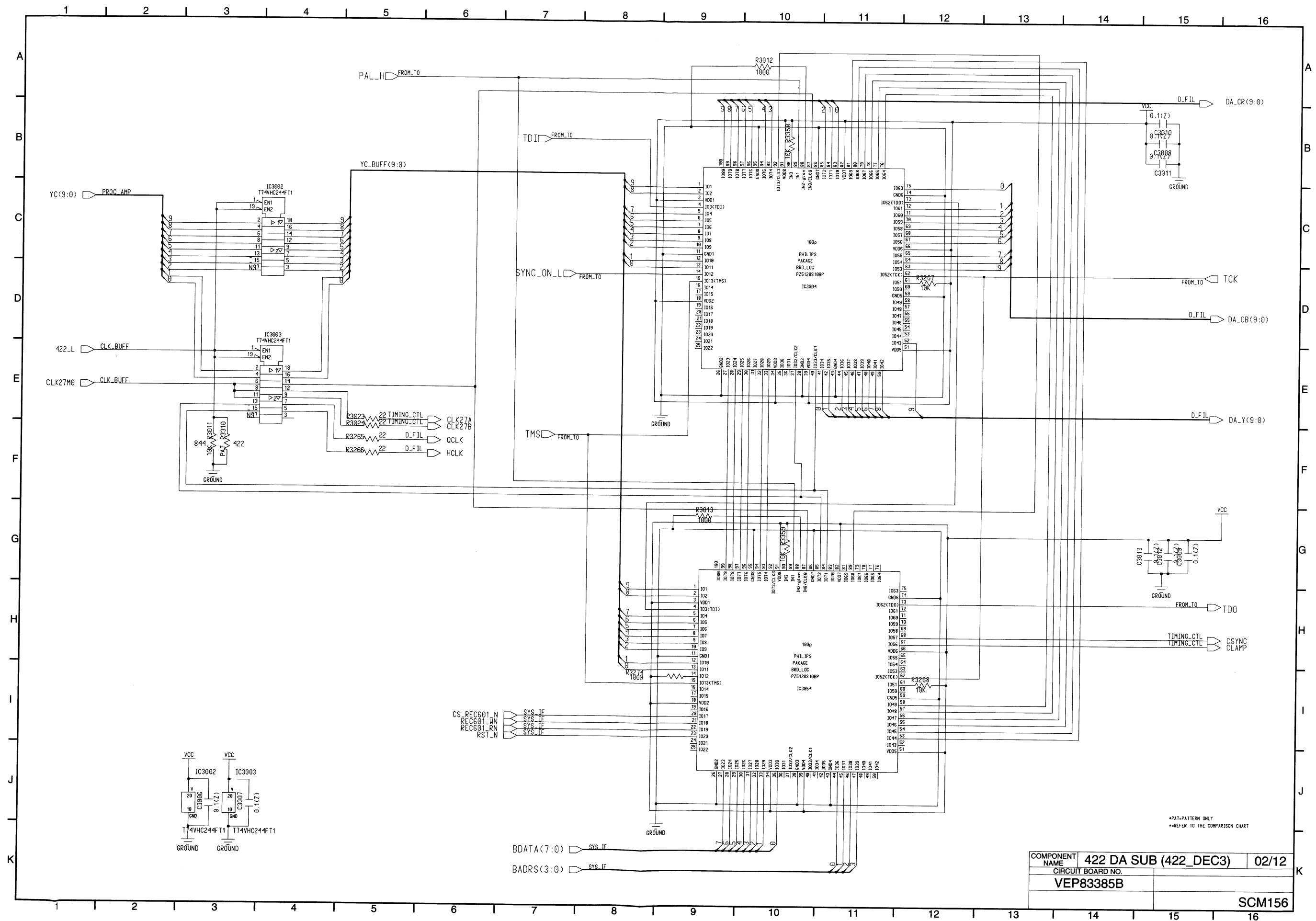


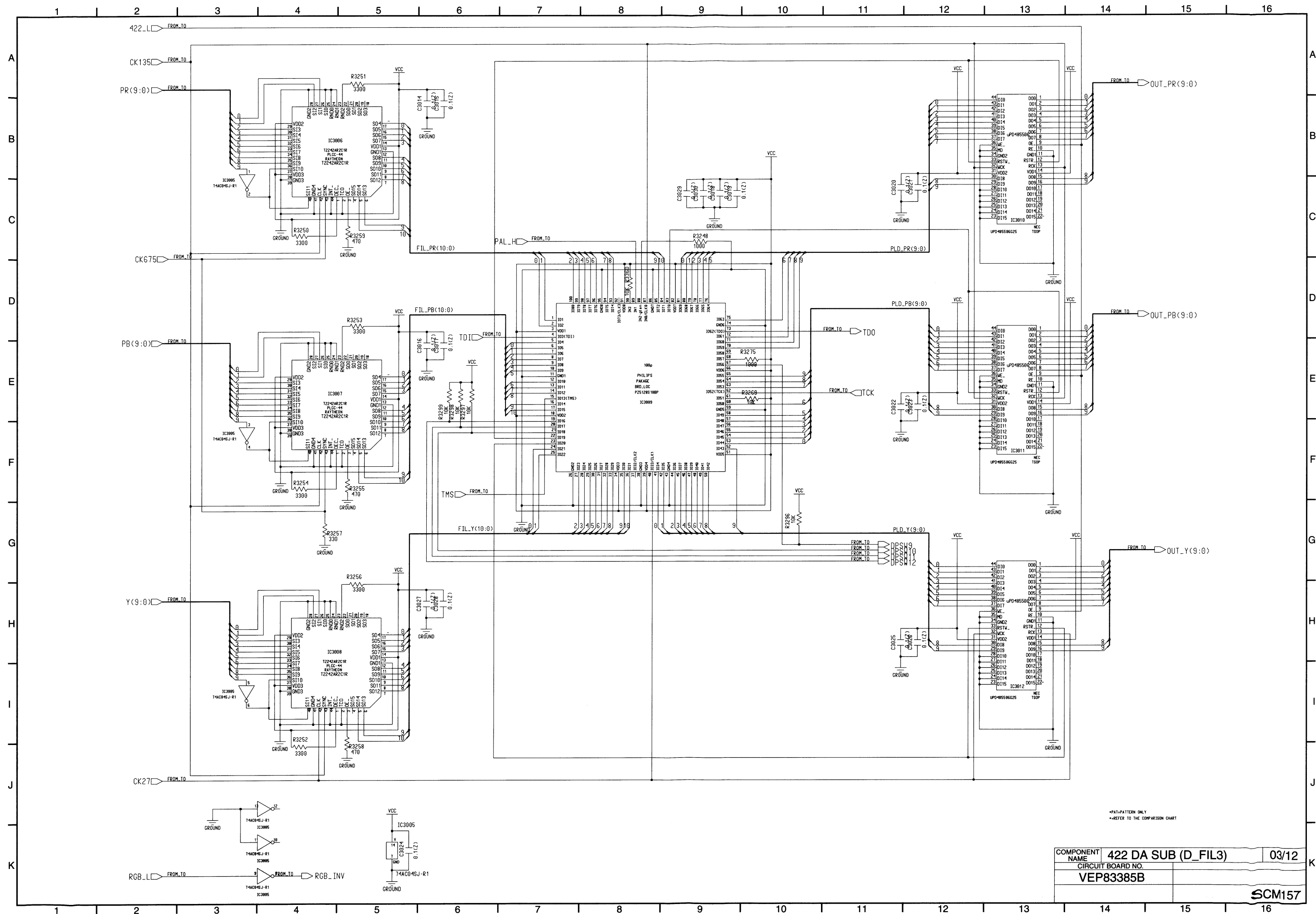
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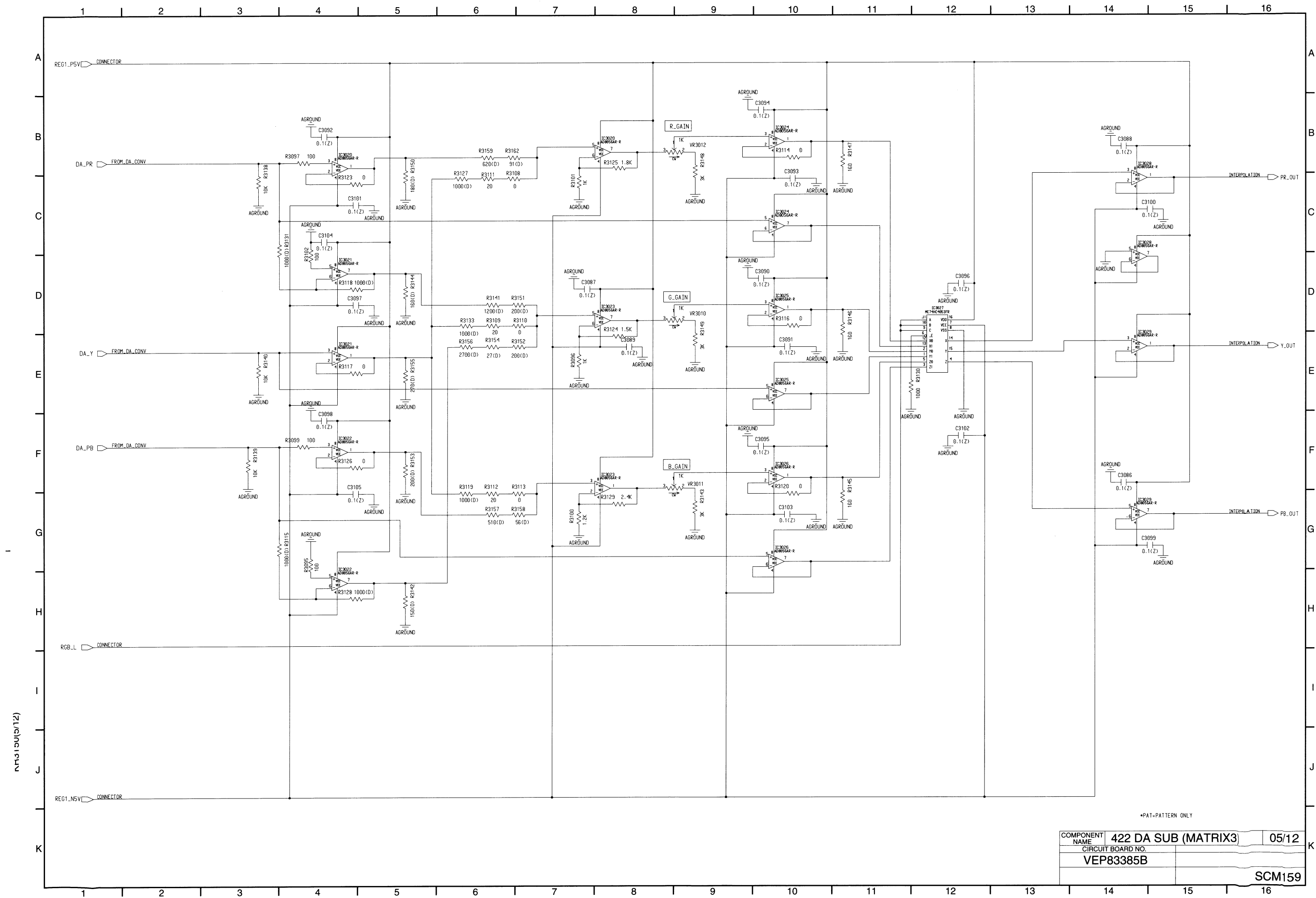
COMPONENT NAME	F6:V OUT (CFDET)	44/44
CIRCUIT BOARD NO.	VEP83454B	
		SCM154

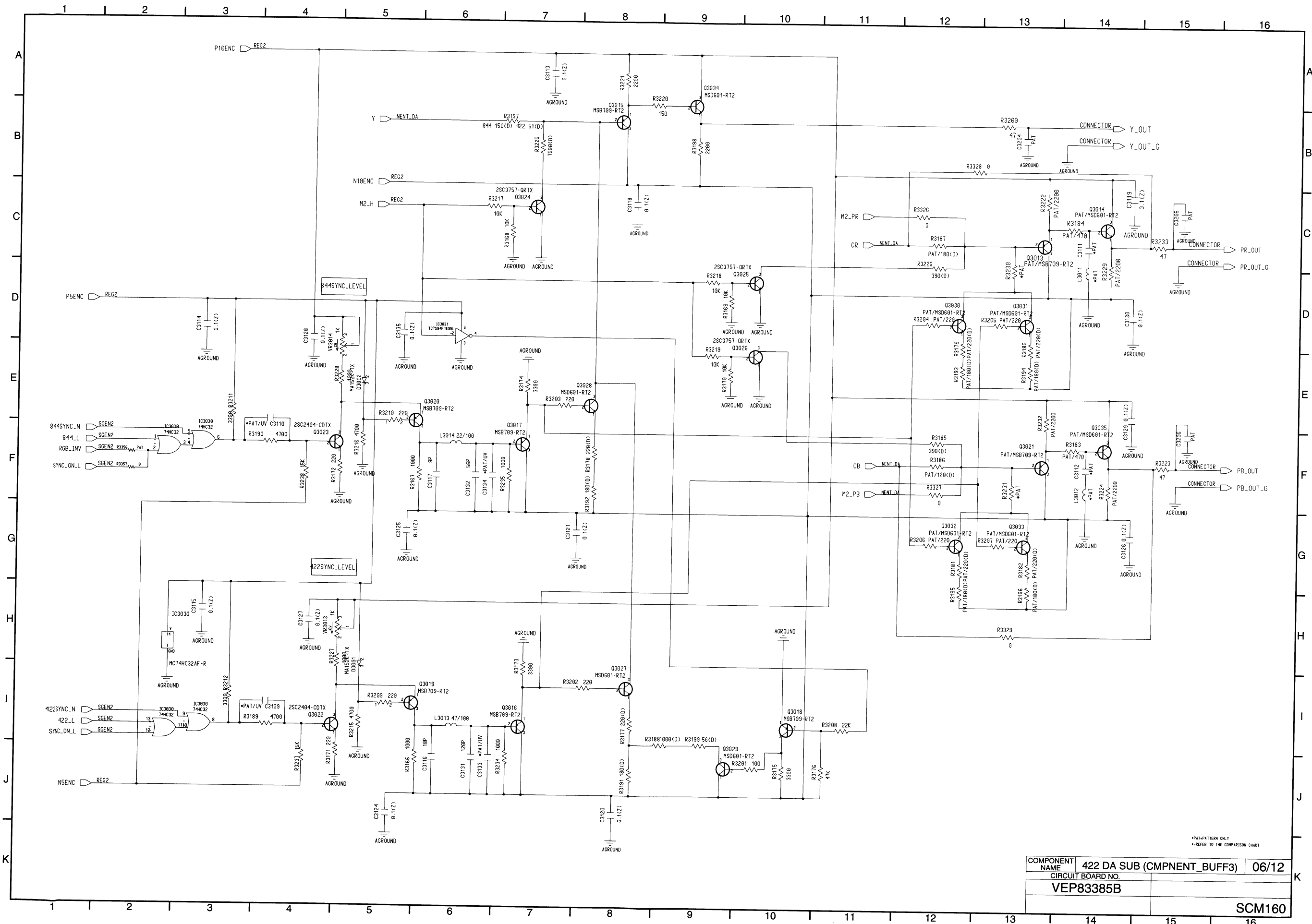


COMPONENT NAME	422 DA SUB (844DA3)	01/12
CIRCUIT BOARD NO.	VEP83385B	
SCM155		





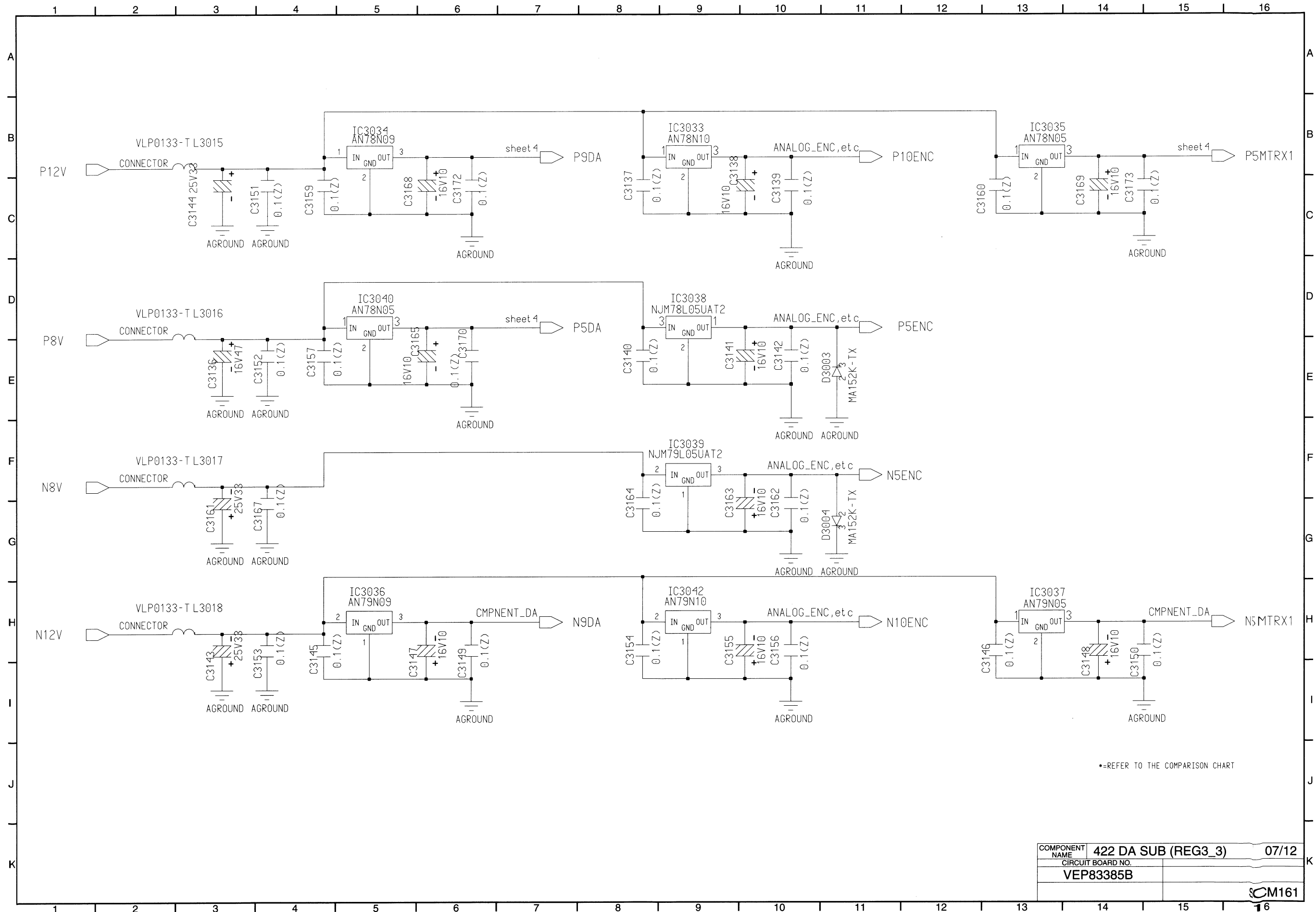




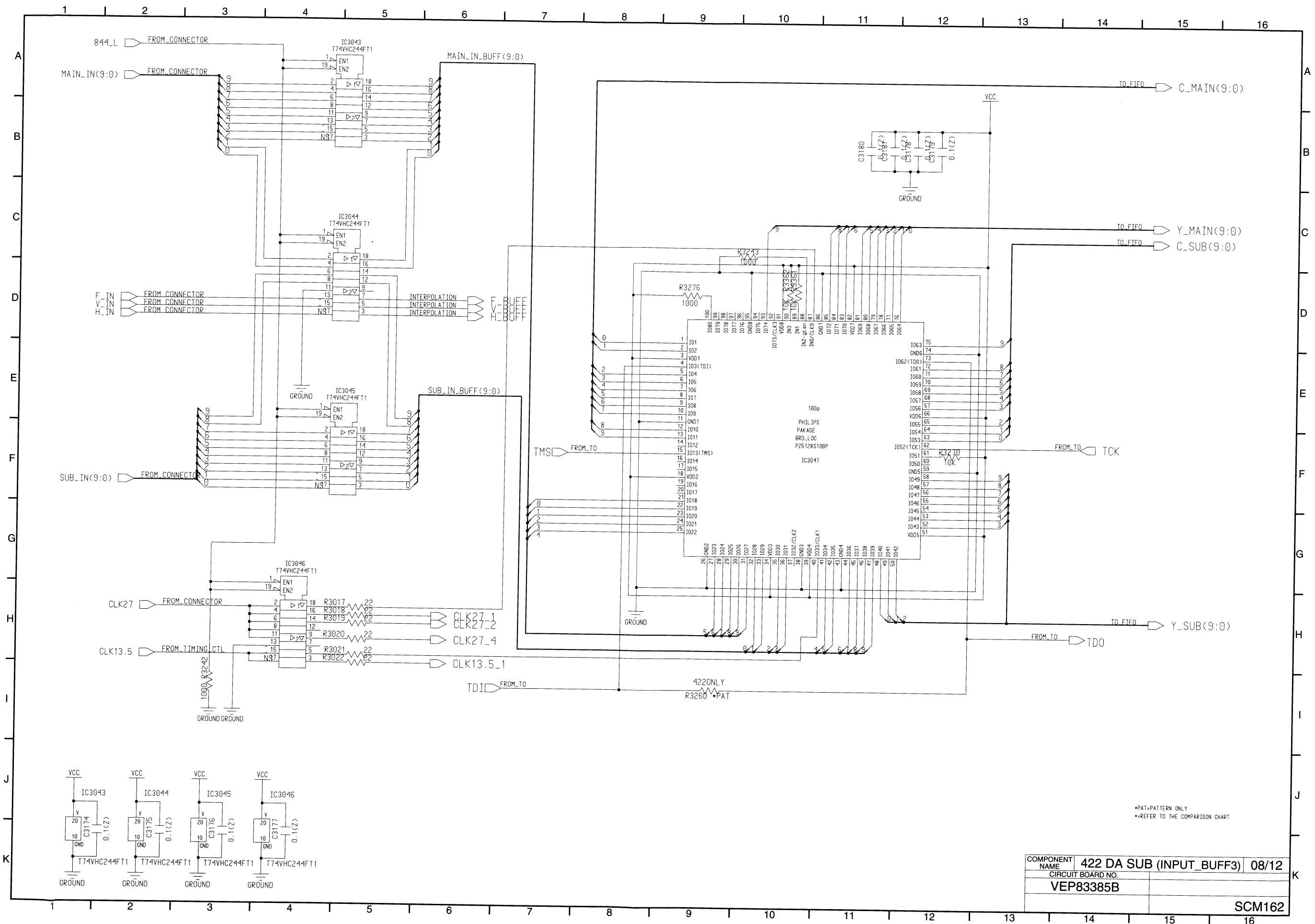
COMPONENT NAME	422 DA SUB (CMPNENT_BUFF3)	06/12
CIRCUIT BOARD NO.	VEP83385B	
SCM160		

KFR50(6/12)

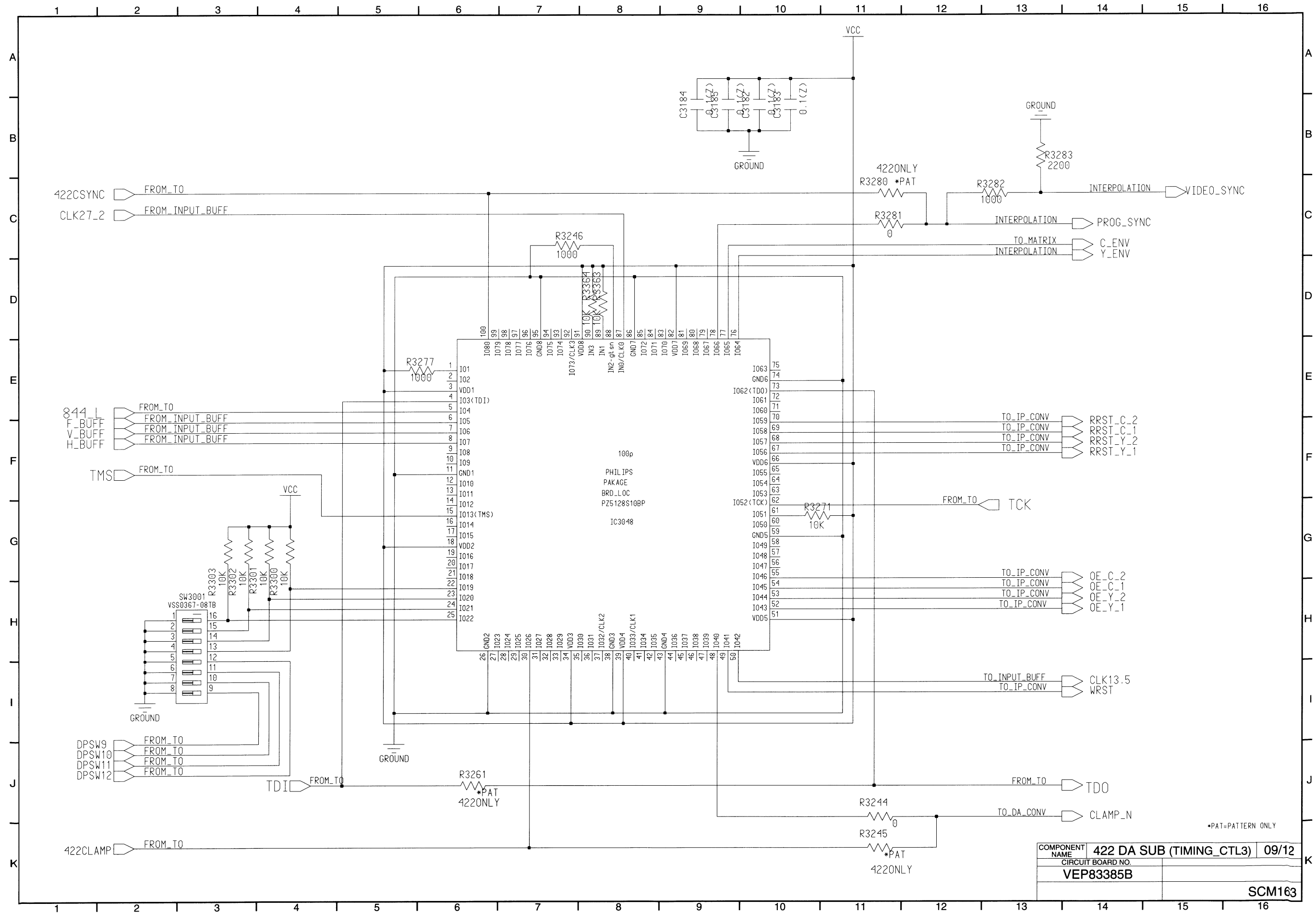
KF3T50(7/12)



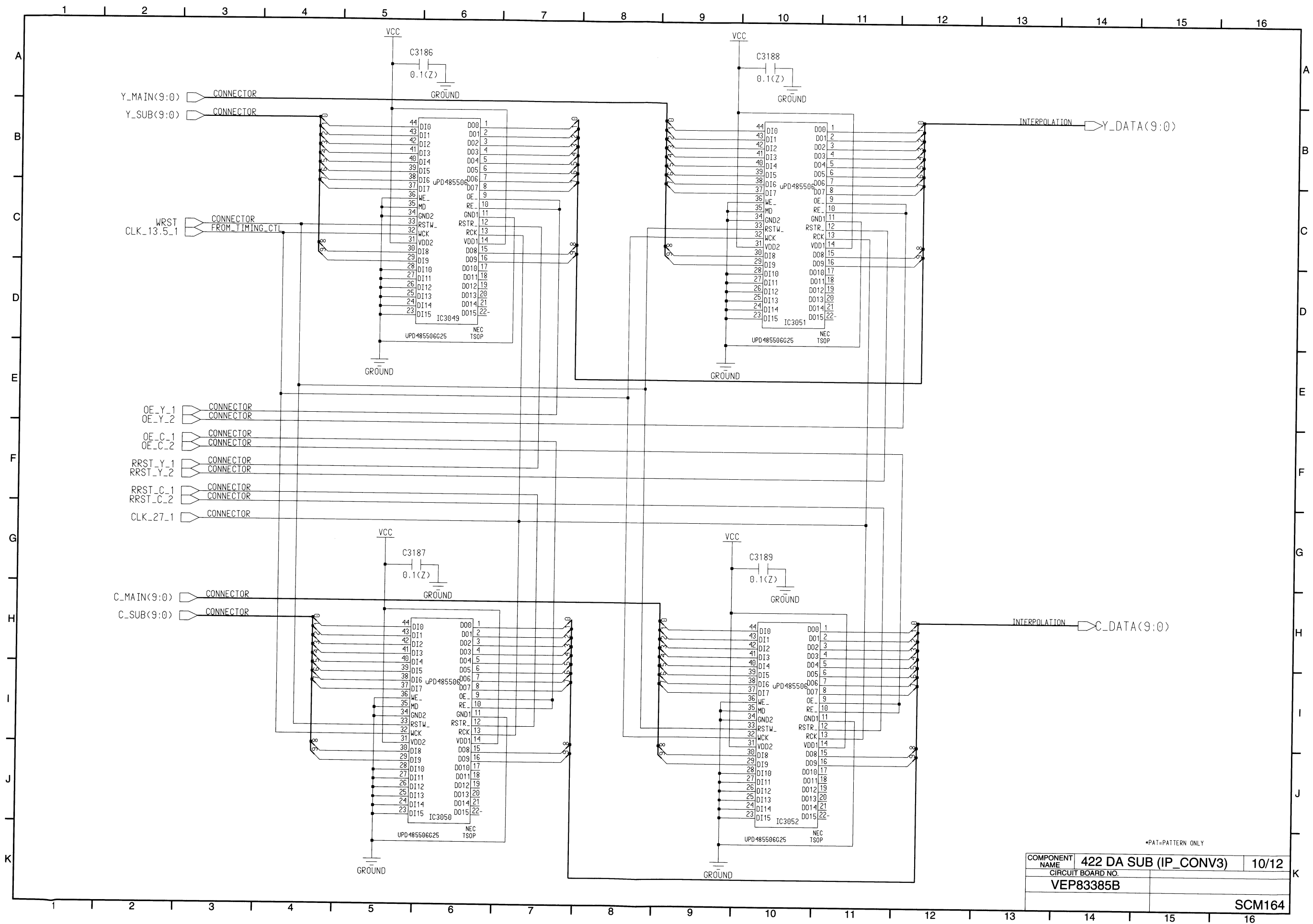
COMPONENT NAME	422 DA SUB (REG3_3)	07/12
CIRCUIT BOARD NO.	VEP83385B	
		CM161



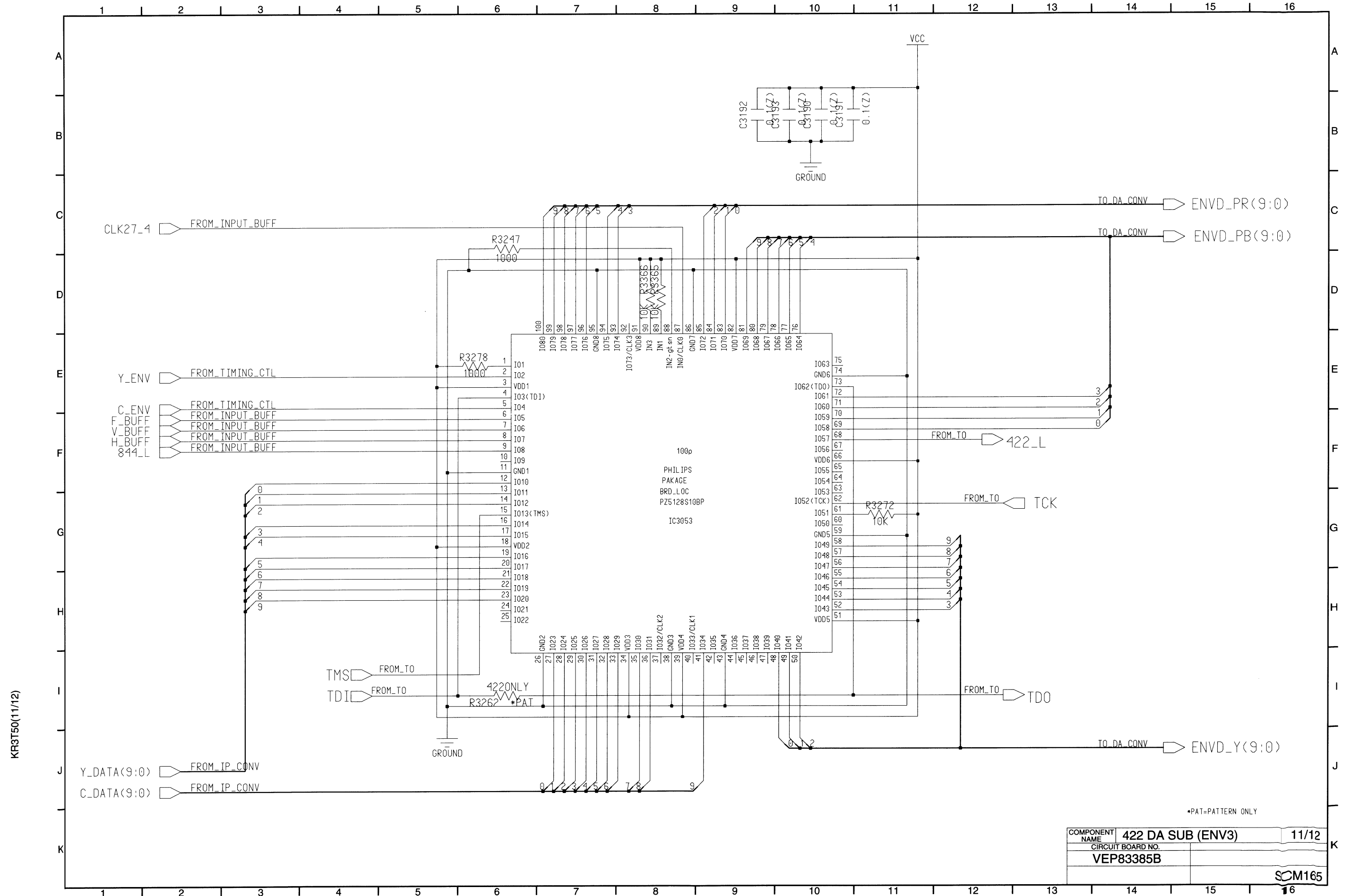
KR3T50(9/12)



COMPONENT NAME	422 DA SUB (TIMING_CTL3)	09/12
CIRCUIT BOARD NO.	VEP83385B	
		SCM163



KR3T50(10/12)

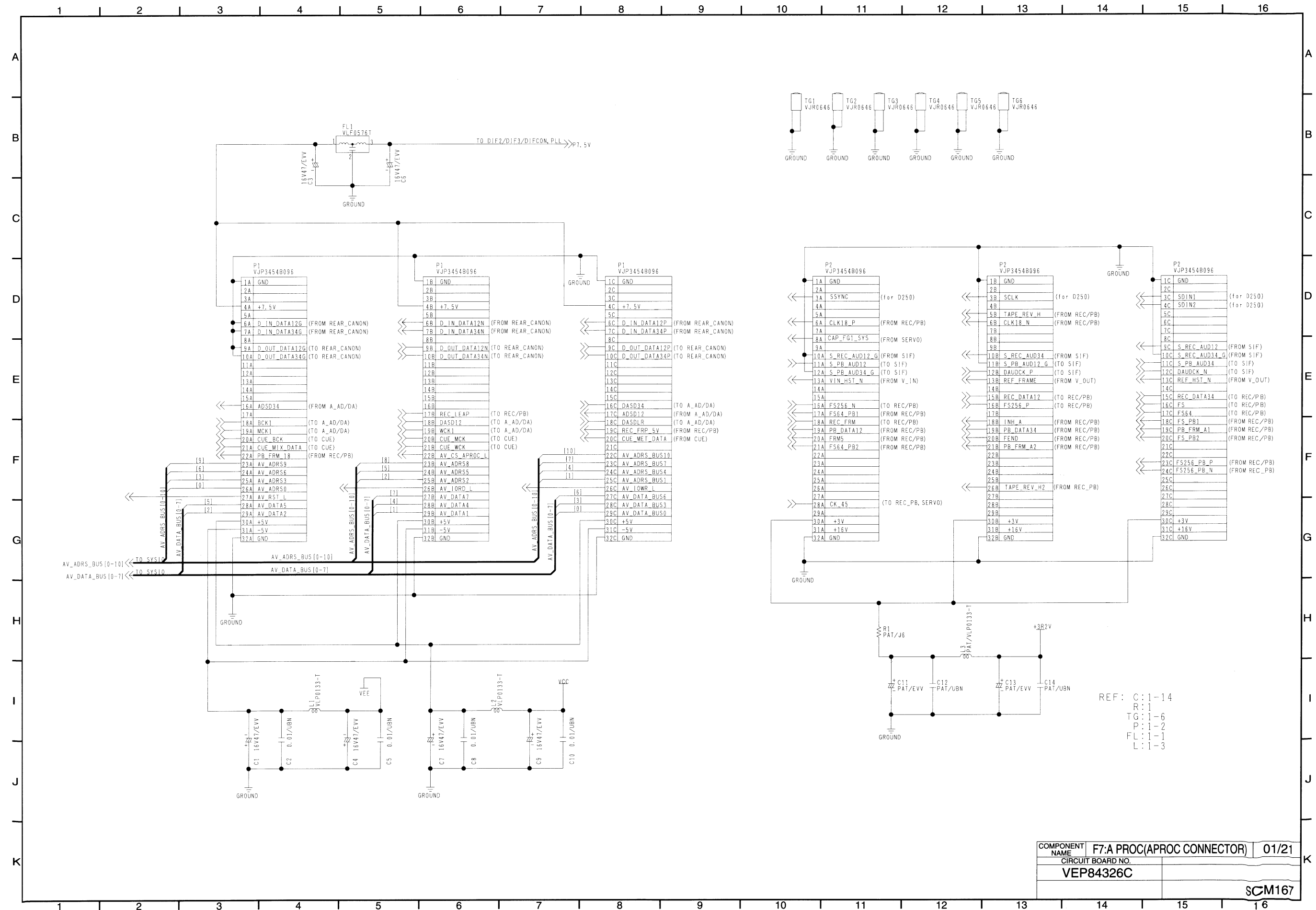


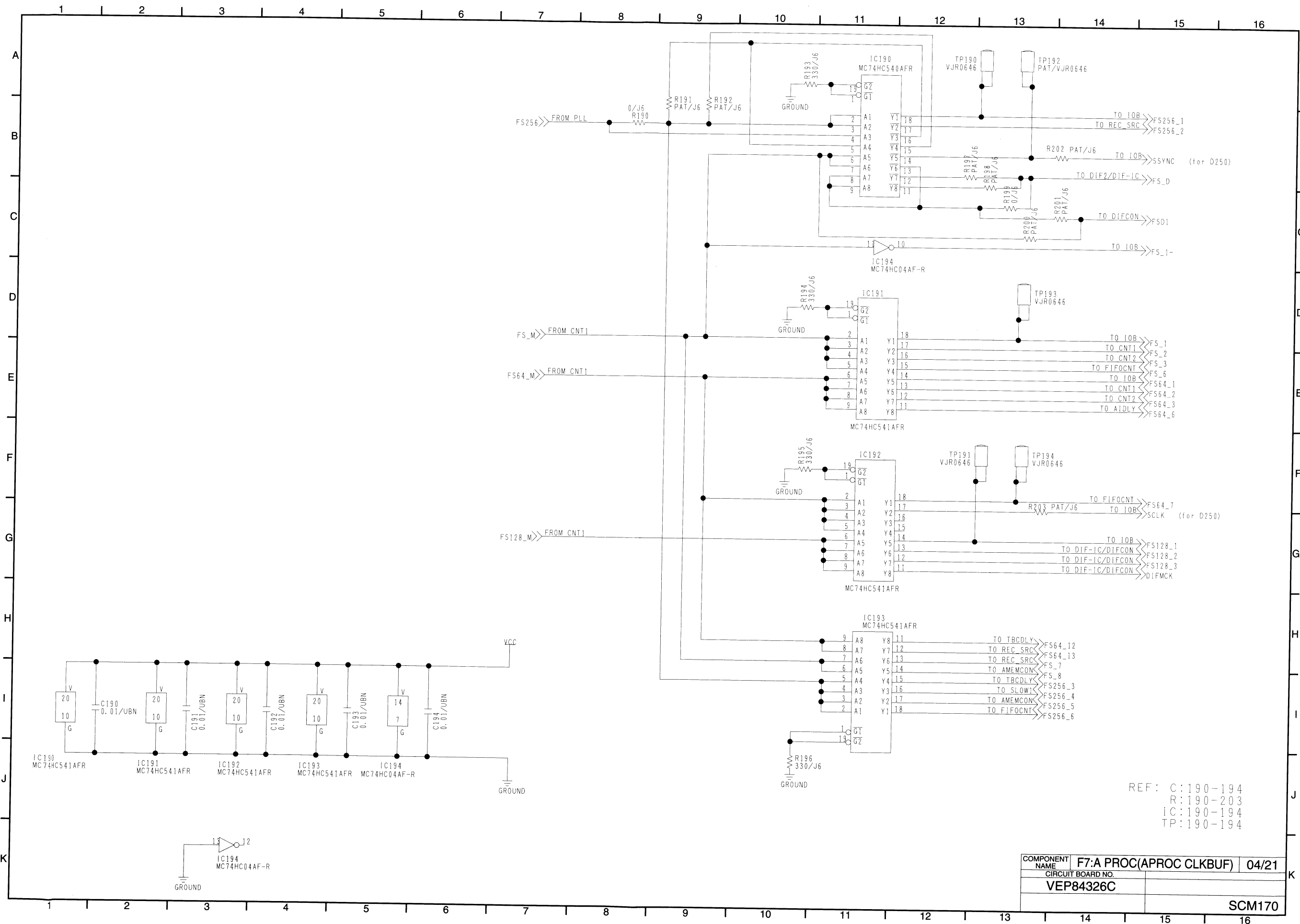
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B																
C																
D																
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Ref No.	AJ-D940
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C3087	-----
C3088	-----
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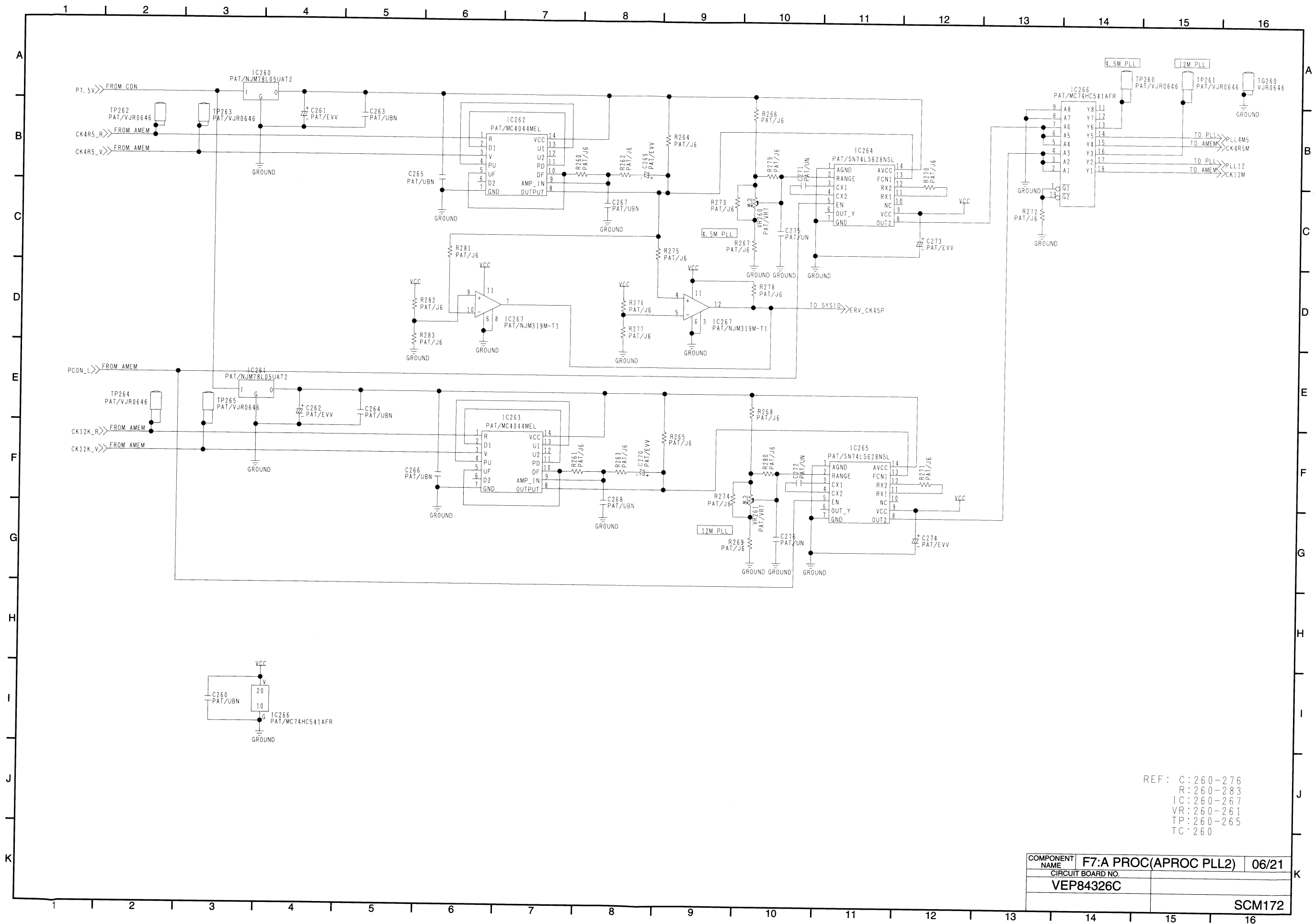
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Q3017	-----
Q3020	-----
Q3023	-----
Q3028	-----
R3008	-----
R3009	ERJ3GEY0R00V
R3011	-----
R3014	ERJ3GEY0R00V
R3015	ERJ3GEY0R00V
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R3111	-----
R3112	-----
R3113	-----
R3114	-----
R3115	-----
R3116	-----
R3117	-----
R3118	-----
R3119	-----
R3120	-----
R3123	-----
R3124	-----
R3125	-----
R3126	-----
R3127	-----
R3128	-----
R3129	-----
R3130	-----
R3131	-----
R3133	-----
R3138	-----
R3139	-----
R3140	-----

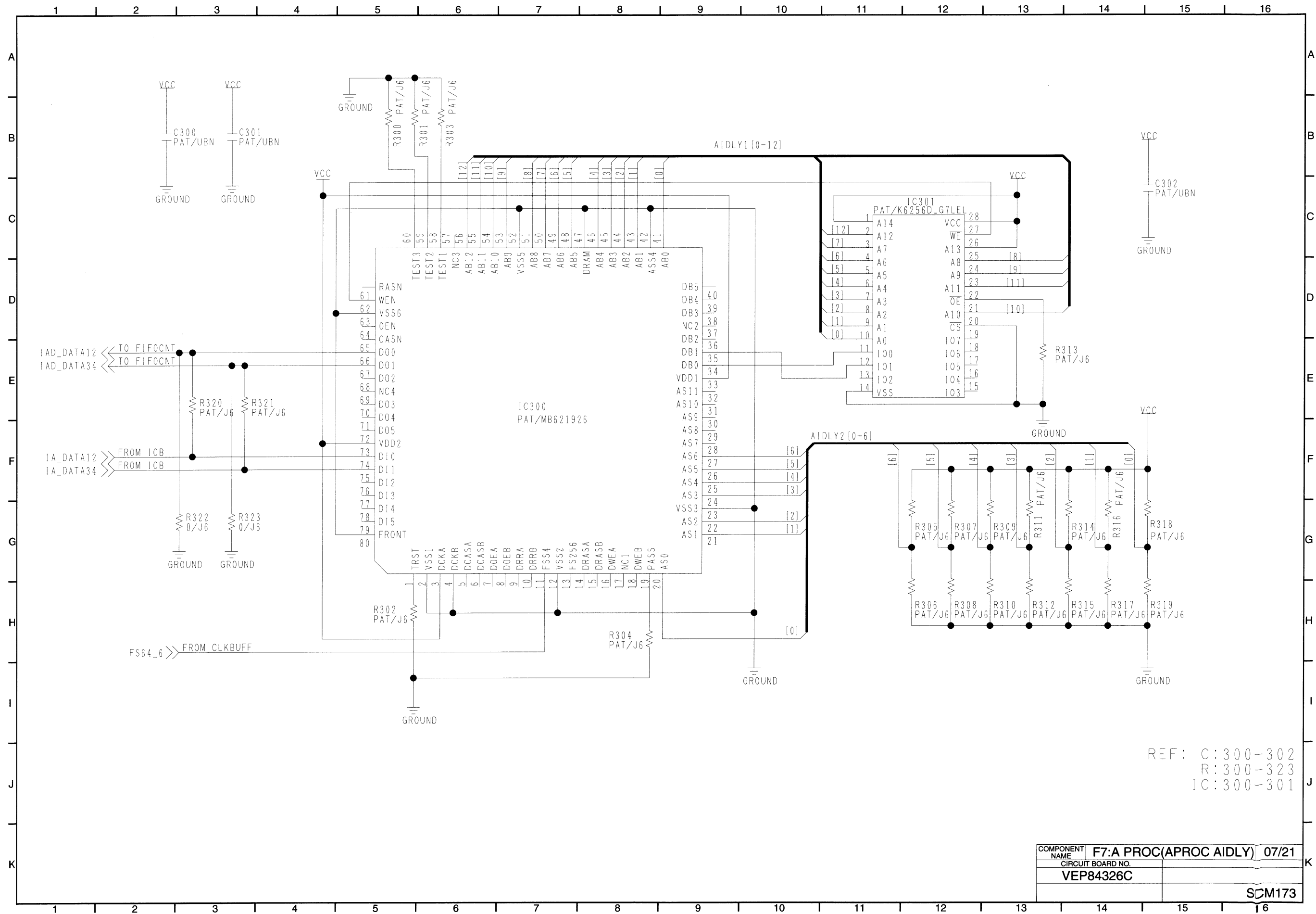
Ref No.	AJ-D940
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KR4H44(4/21)

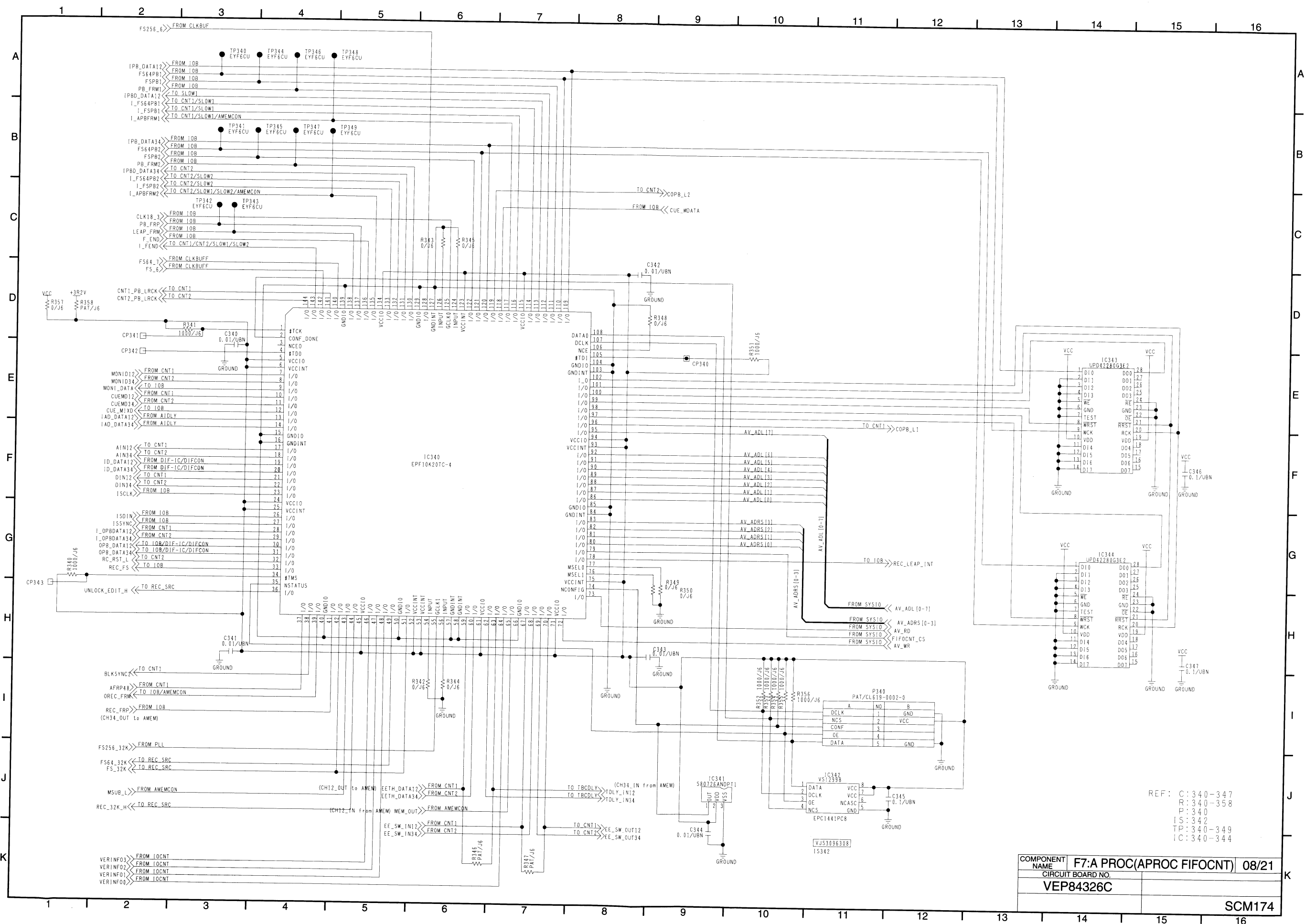




KR4H44(7/21)

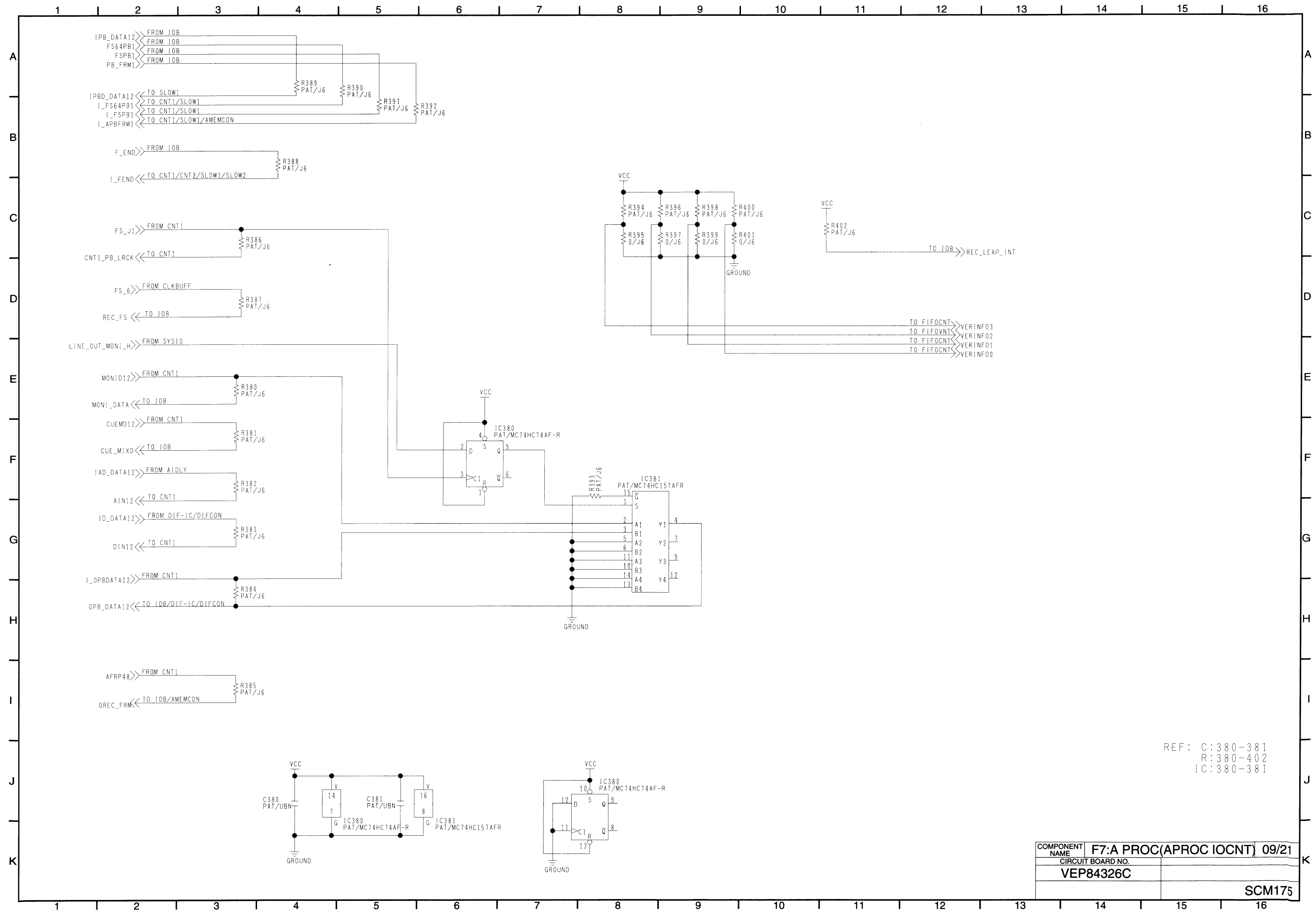
REF: C:300-302
R:300-323
IC:300-301 J

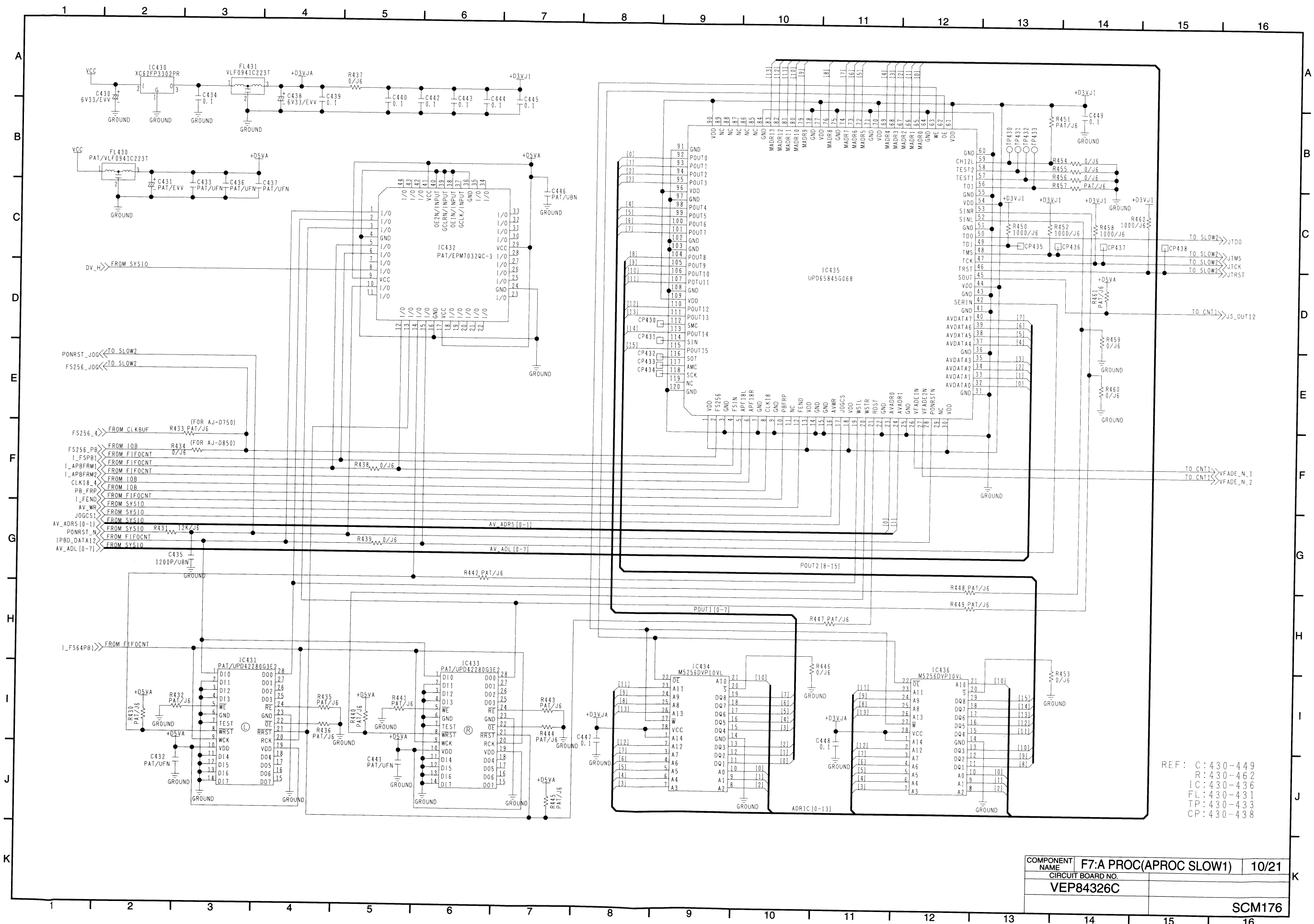
COMPONENT NAME	F7:A PROC(APROC AIDLY)	07/21
CIRCUIT BOARD NO.	VEP84326C	SCM173



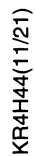
KR4H44(8/21)

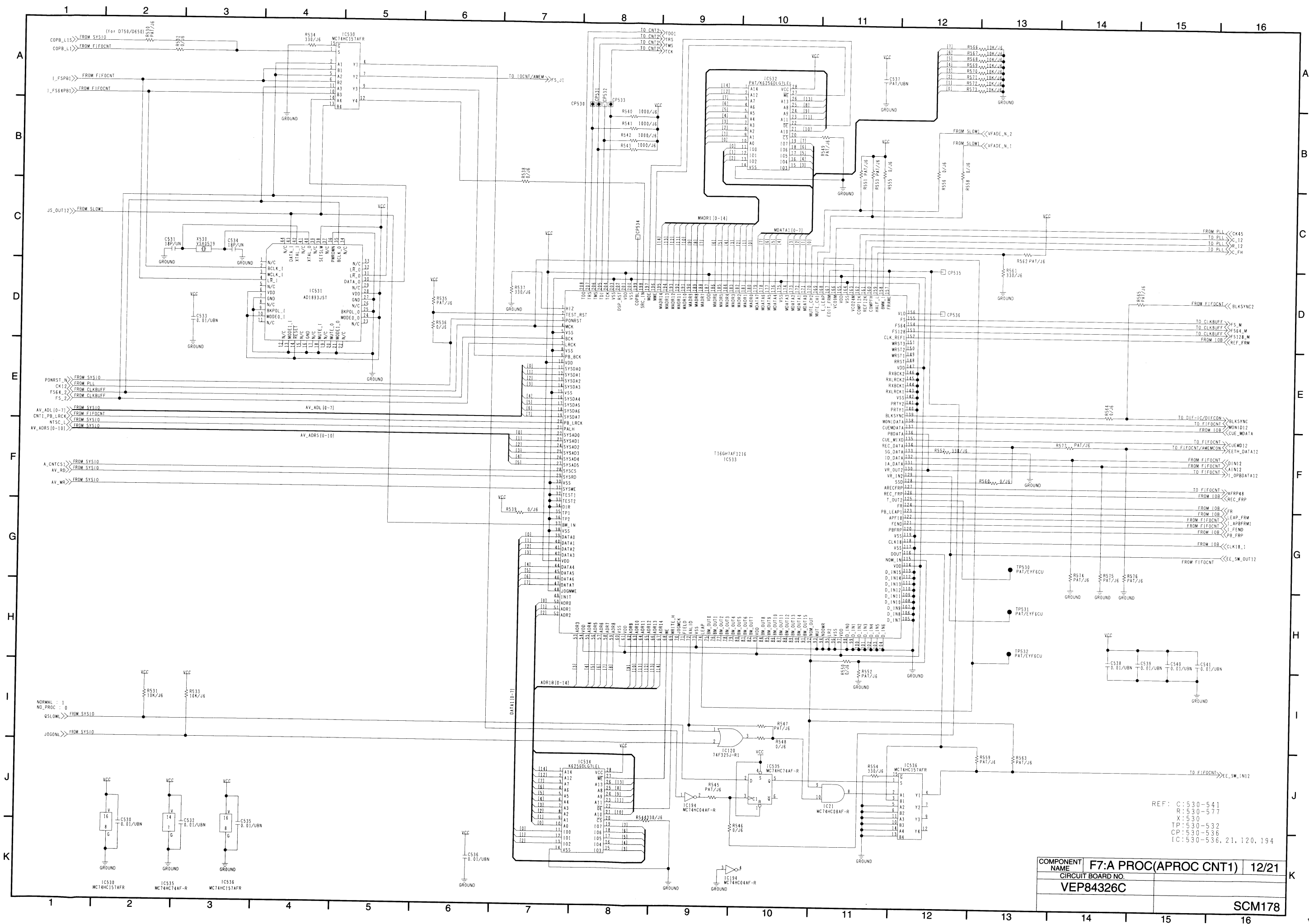
KR4H44(9/21)

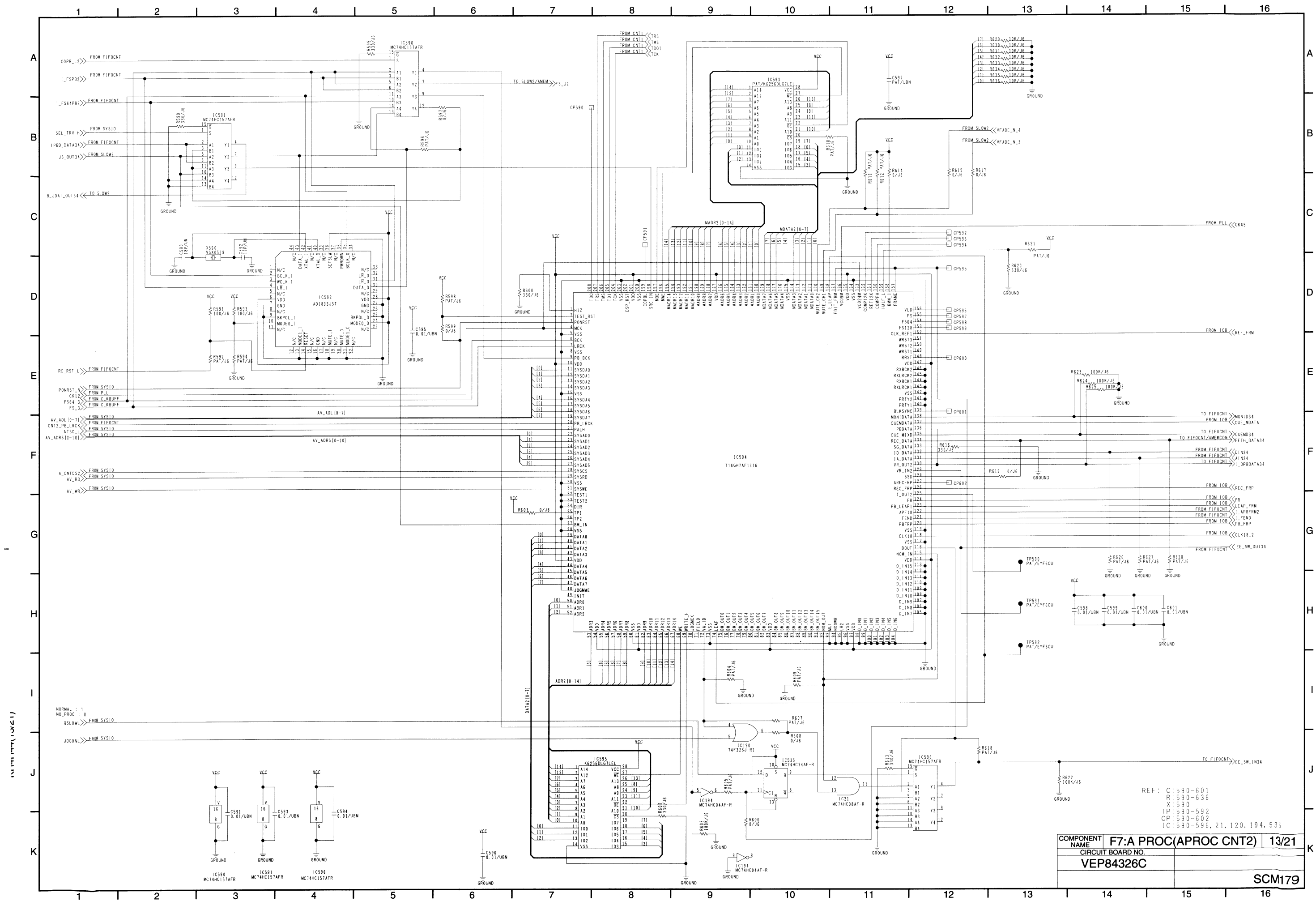


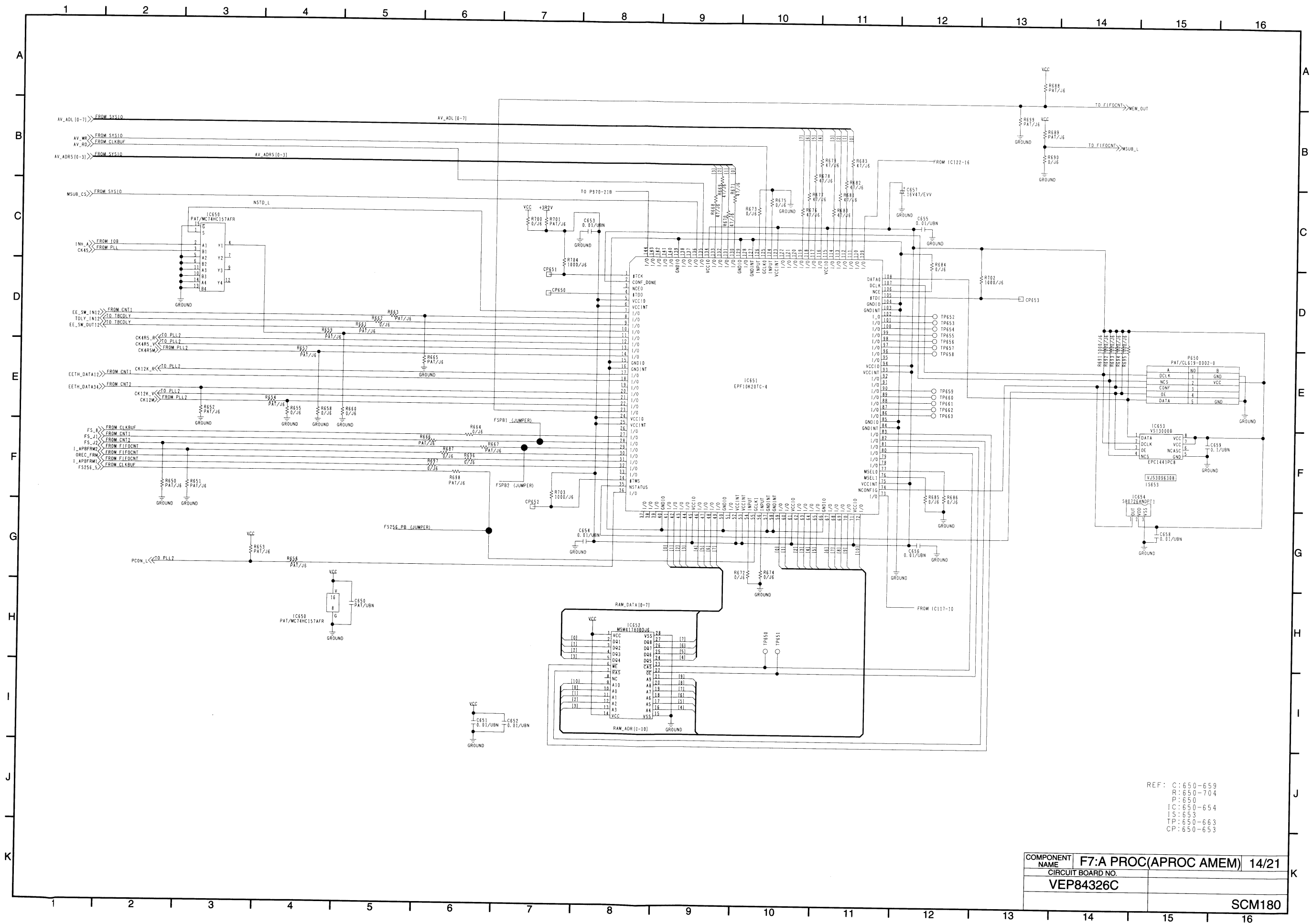


KR4H44(10/21)



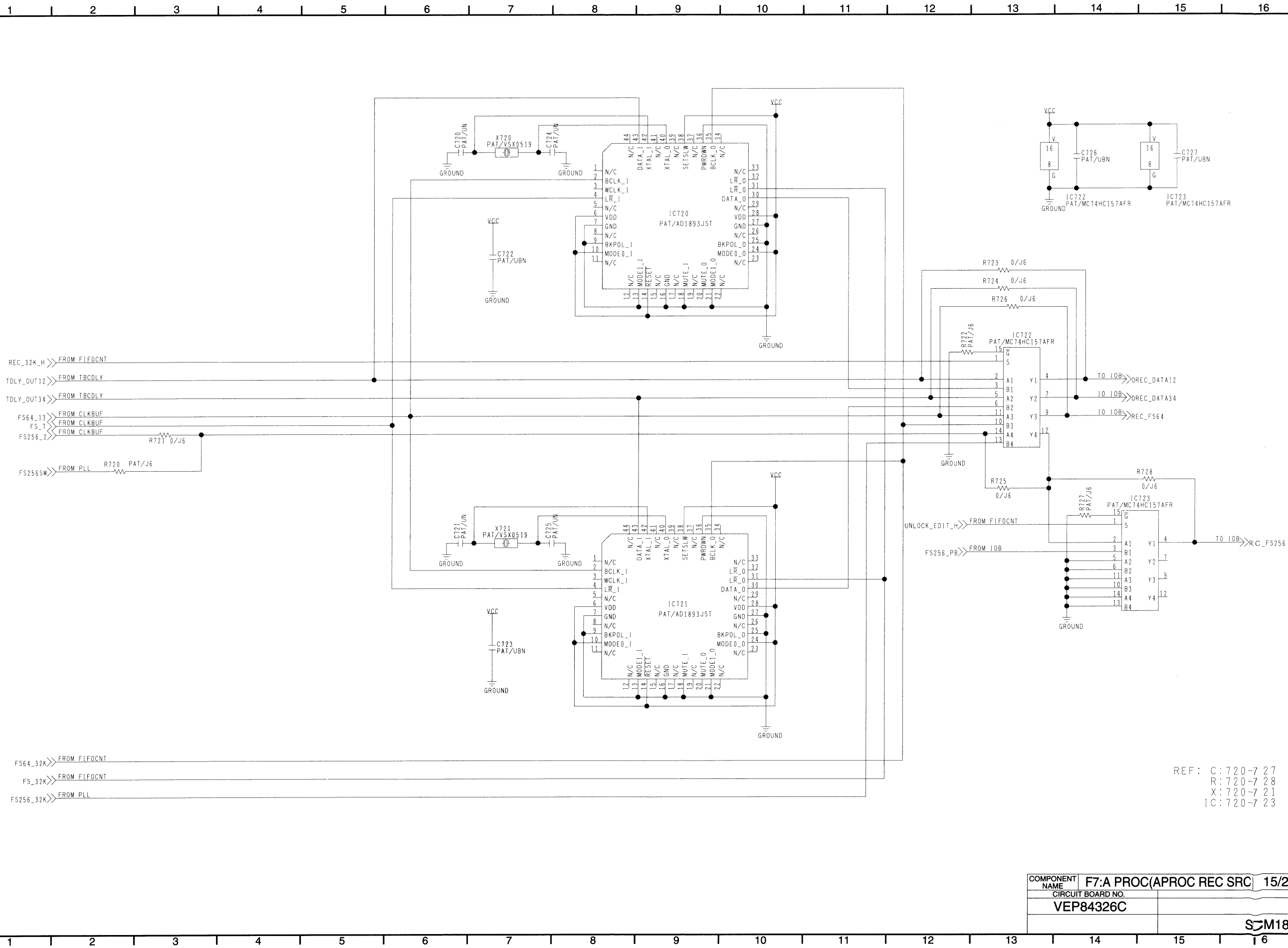






KR4H44(14/21)

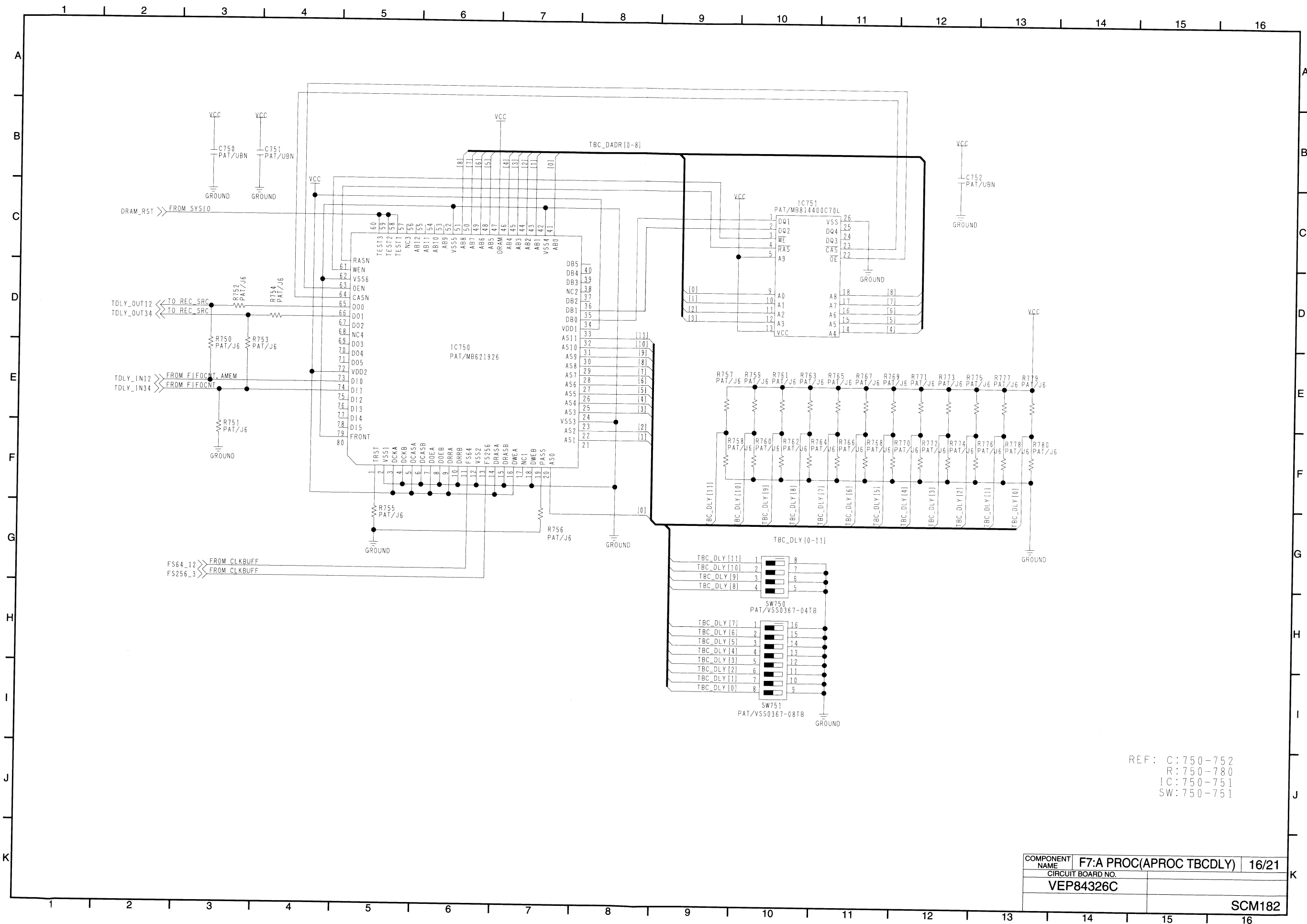
KR4H44(15/21)



REF: C: 720-7 27
R: 720-7 28
X: 720-7 21
IC: 720-7 23

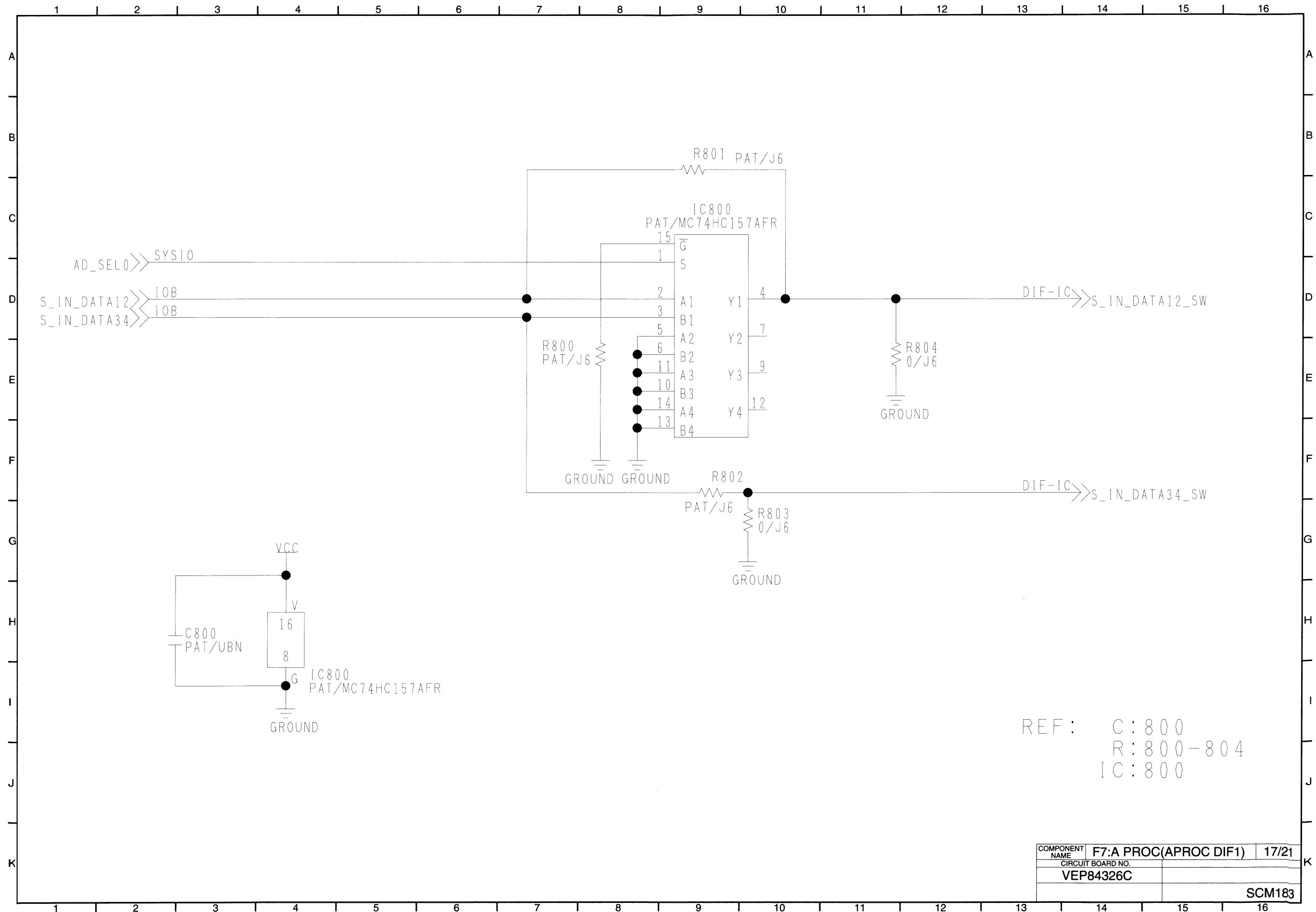
COMPONENT NAME	F7:A PROC(APROC REC SRC	15/21
CIRCUIT BOARD NO.	VEP84326C	

SM181

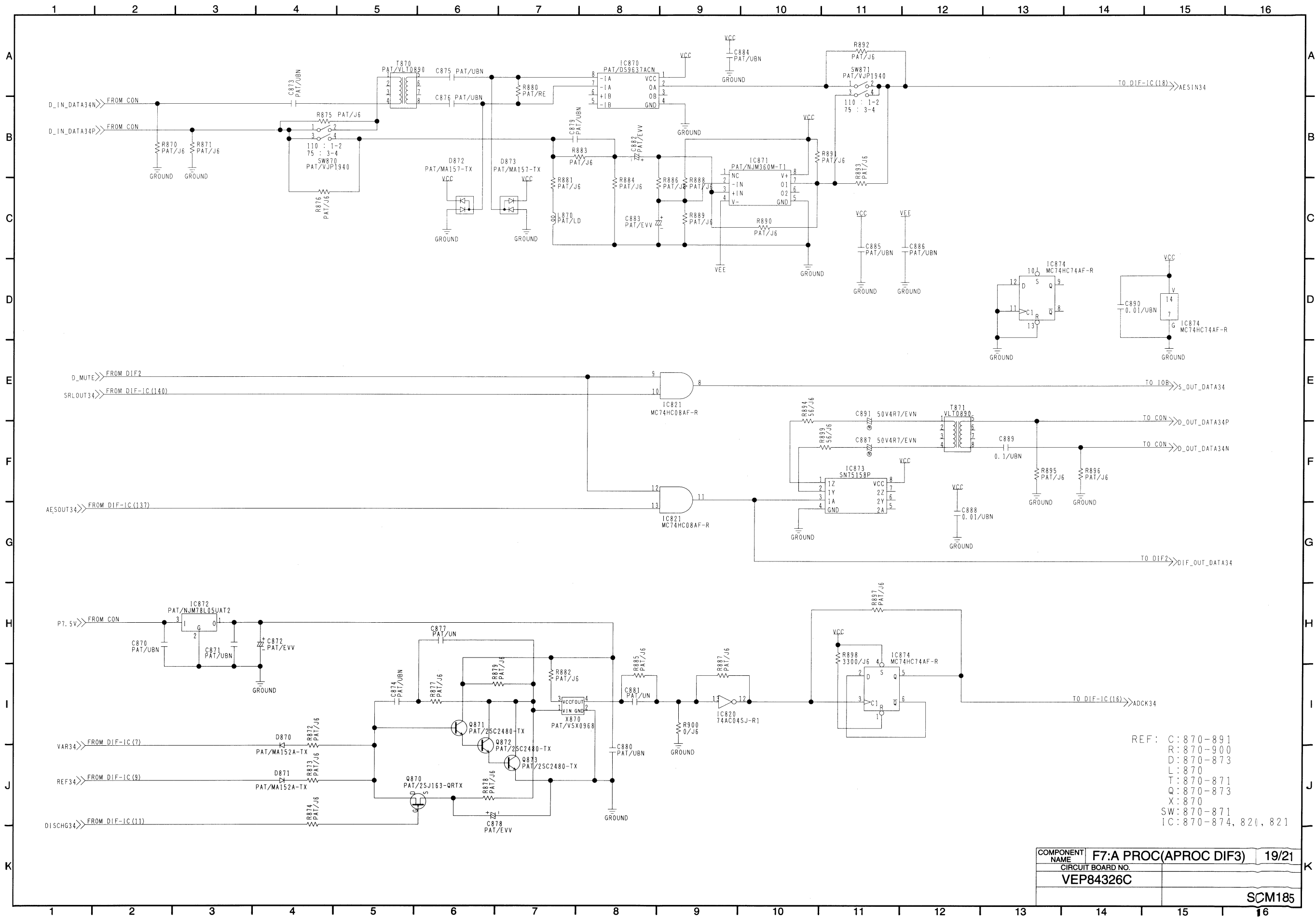


KR4H44(16/21)

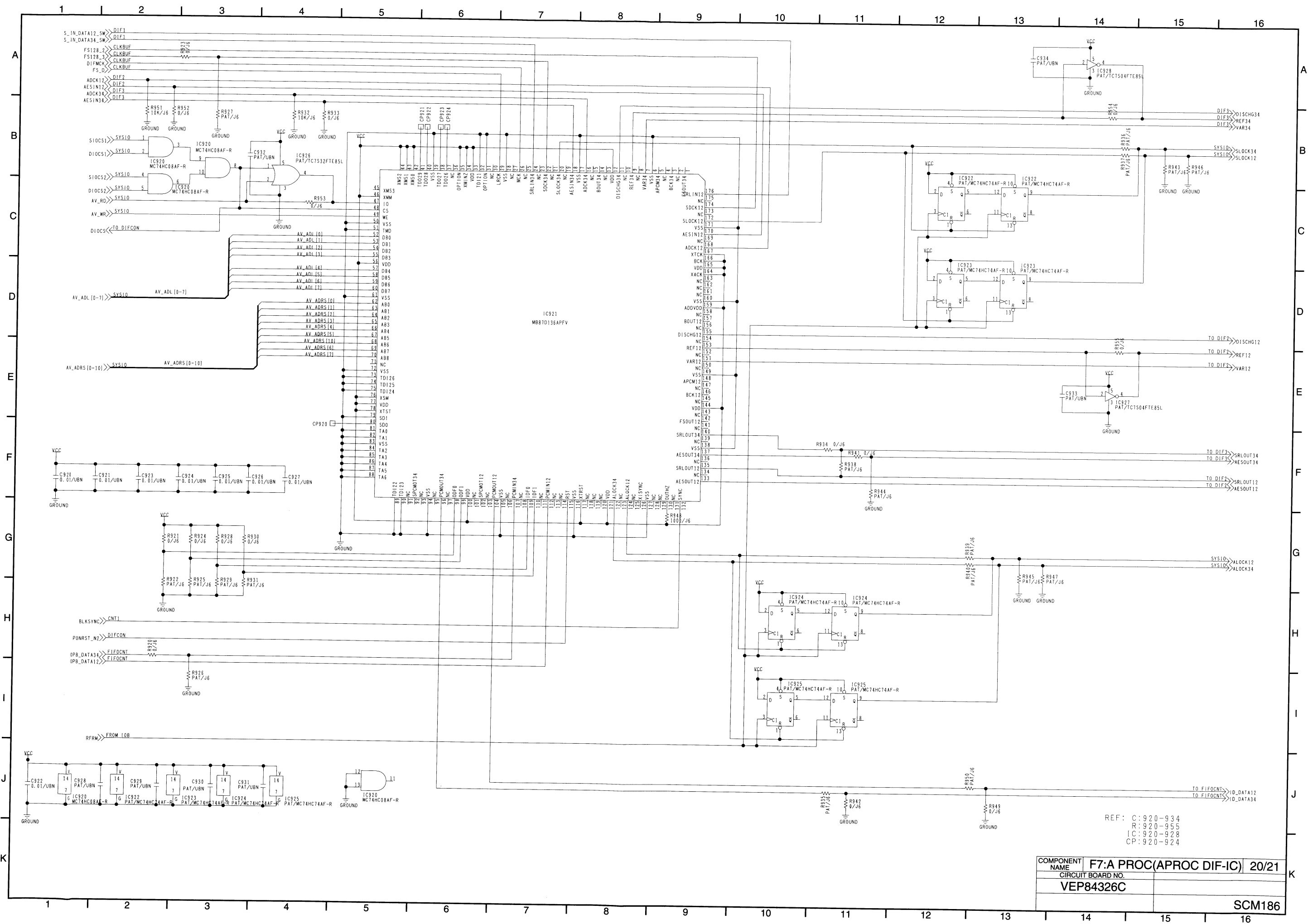
KP4H44(17/21)



KR4H44(19/21)

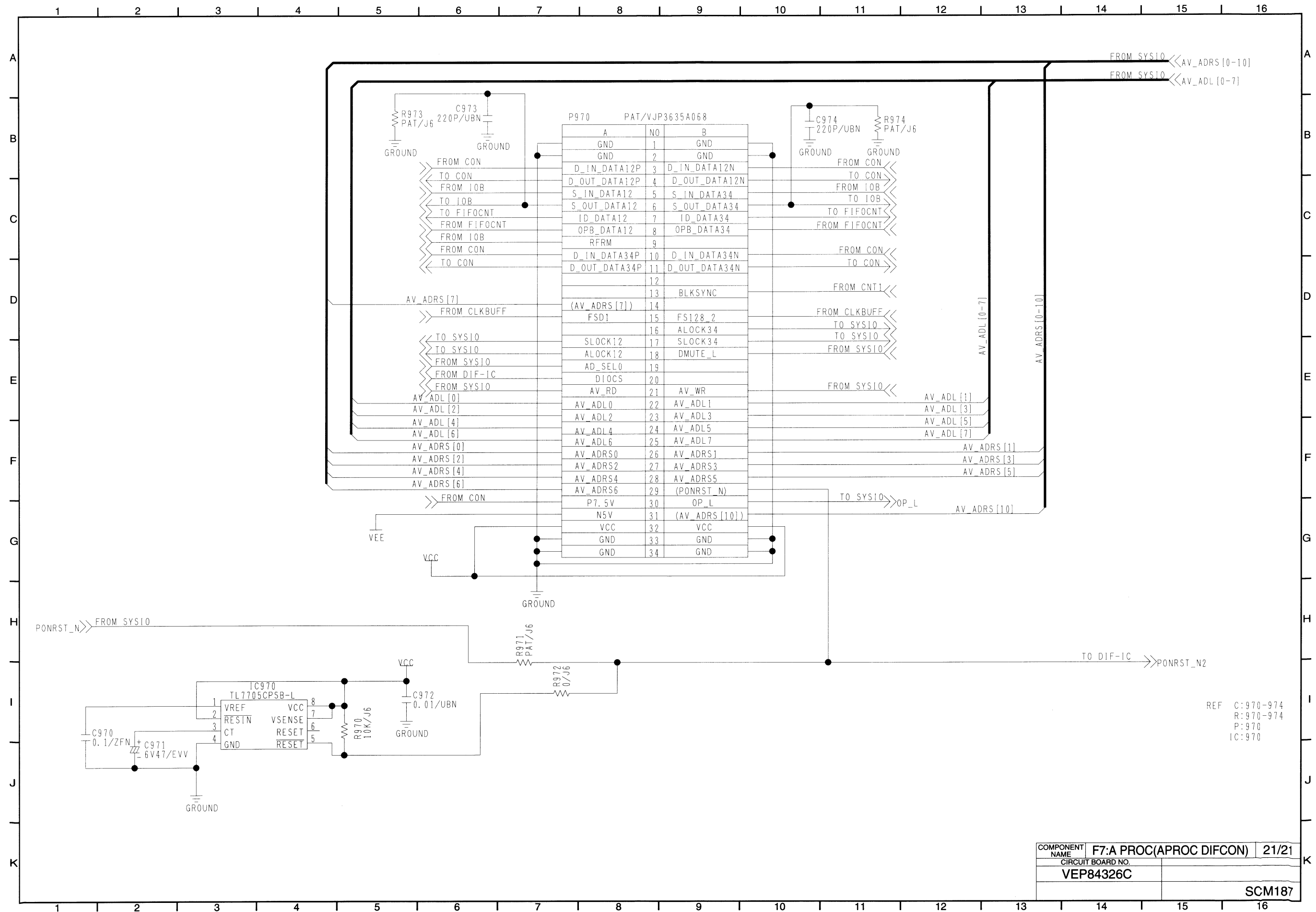


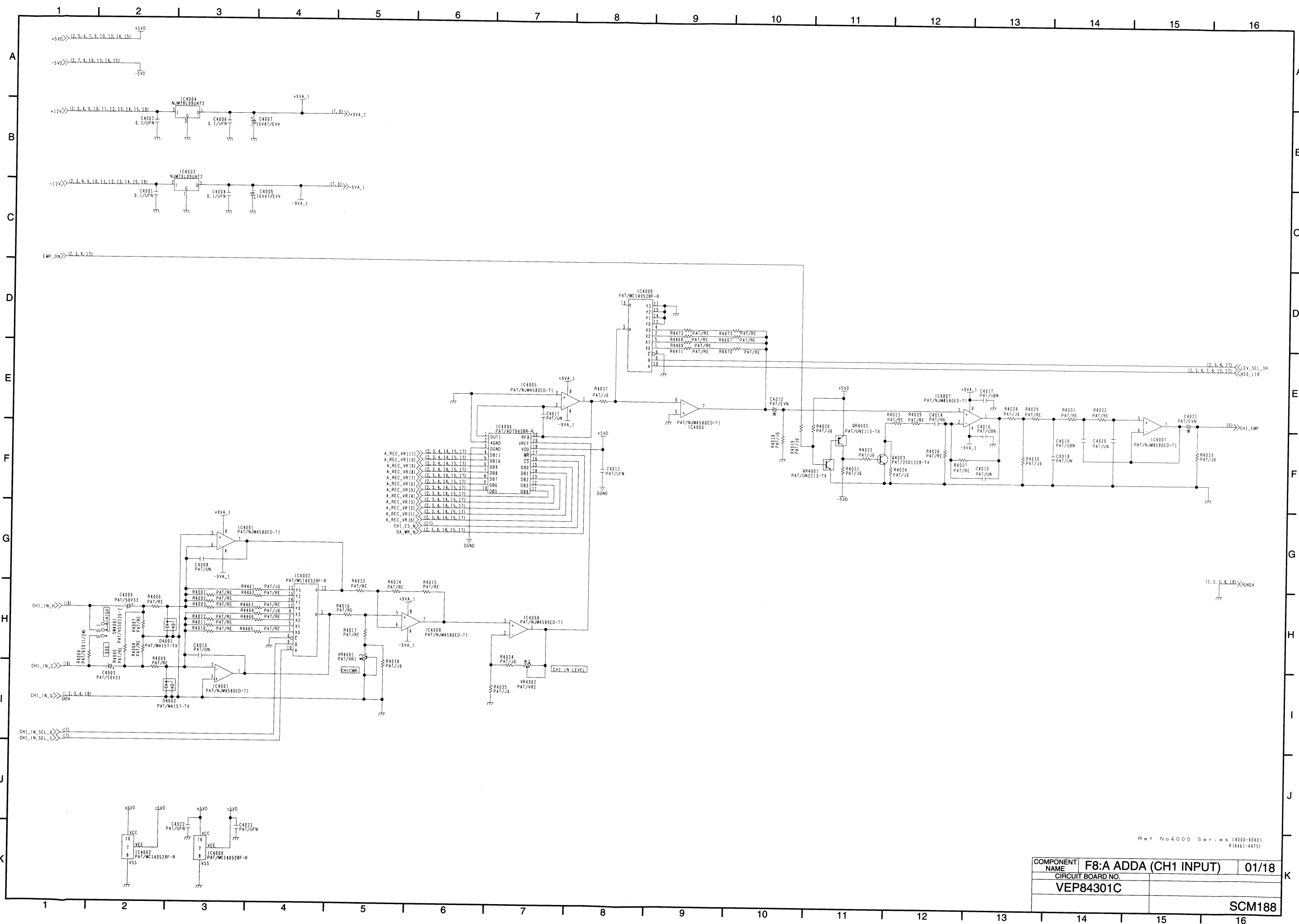
COMPONENT NAME	F7:A PROC (APROC DIF3)	19/21
CIRCUIT BOARD NO.	VEP84326C	
		SCM185

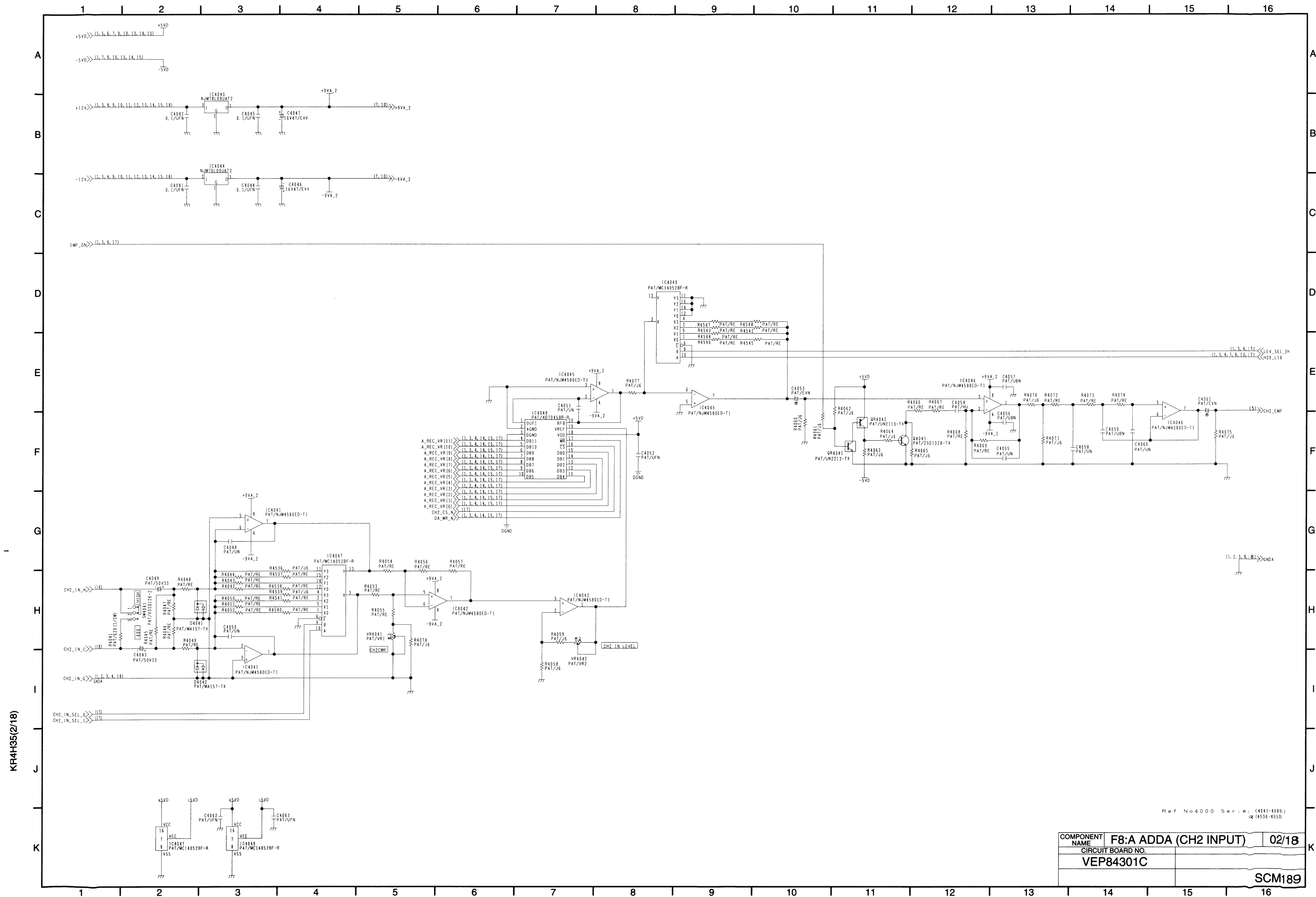


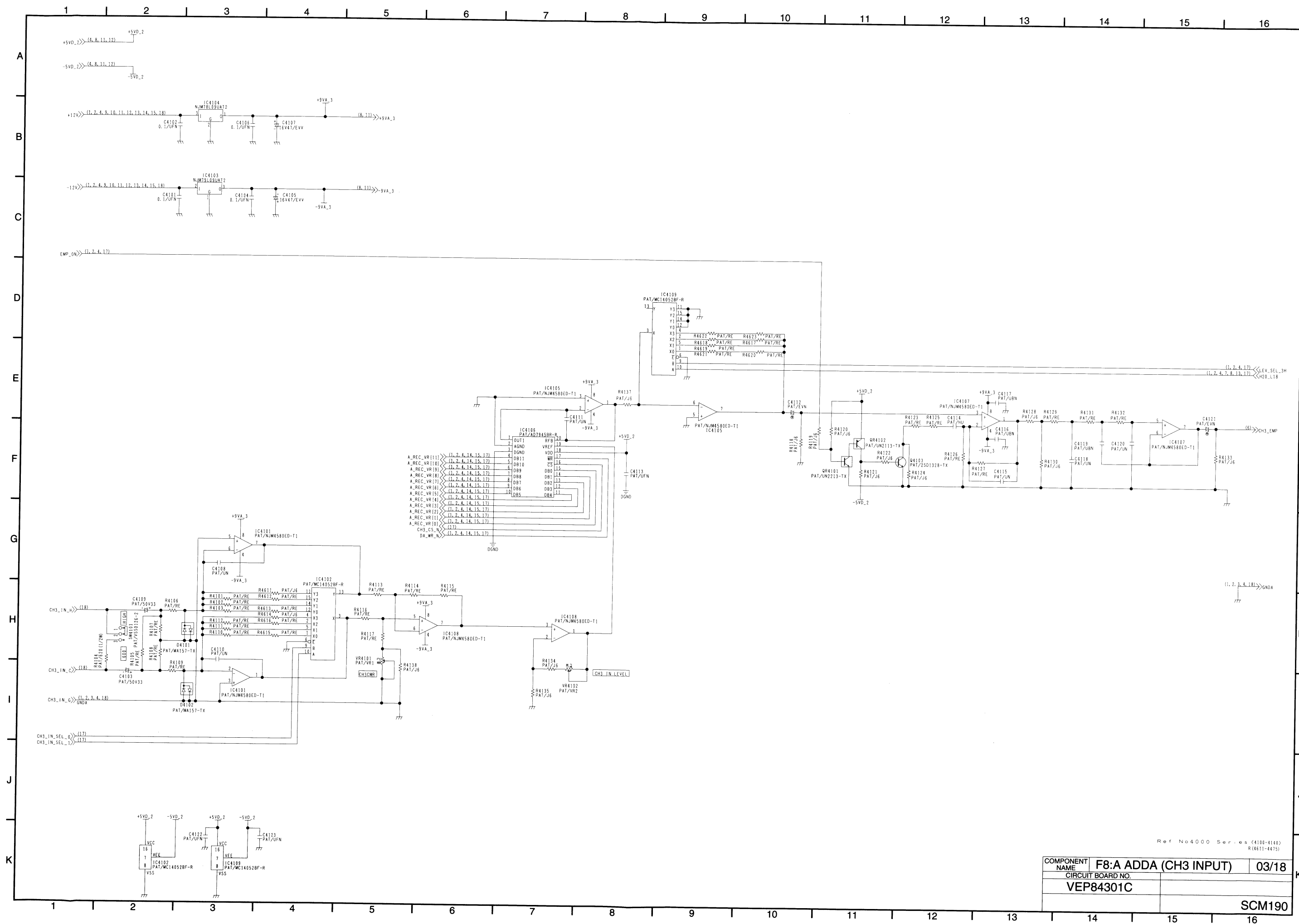
COMPONENT NAME	F7:A PROC (APROC DIF-IC) 20/21
CIRCUIT BOARD NO.	VEP84326C
SCM186	

KR4H44(21/21)

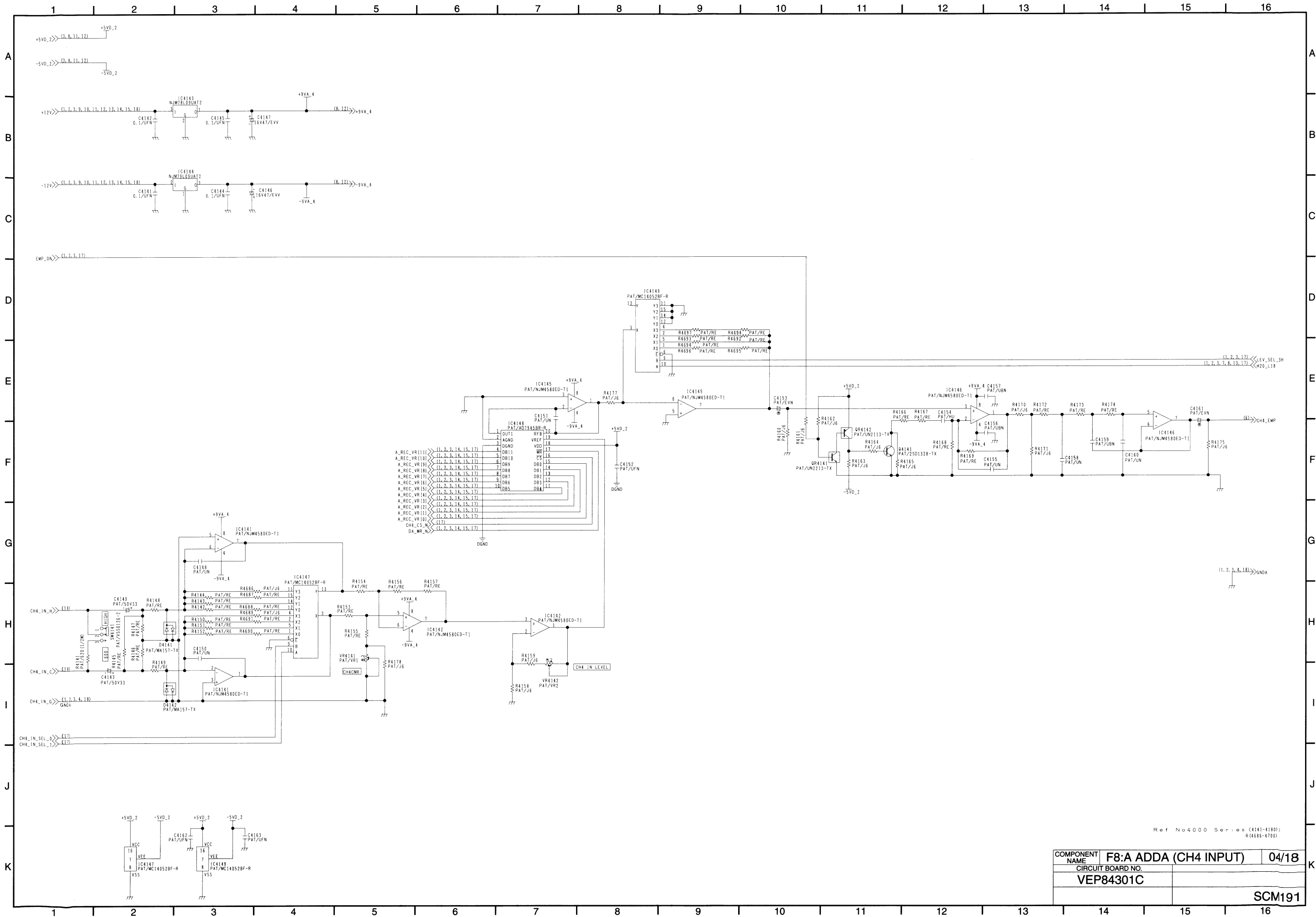




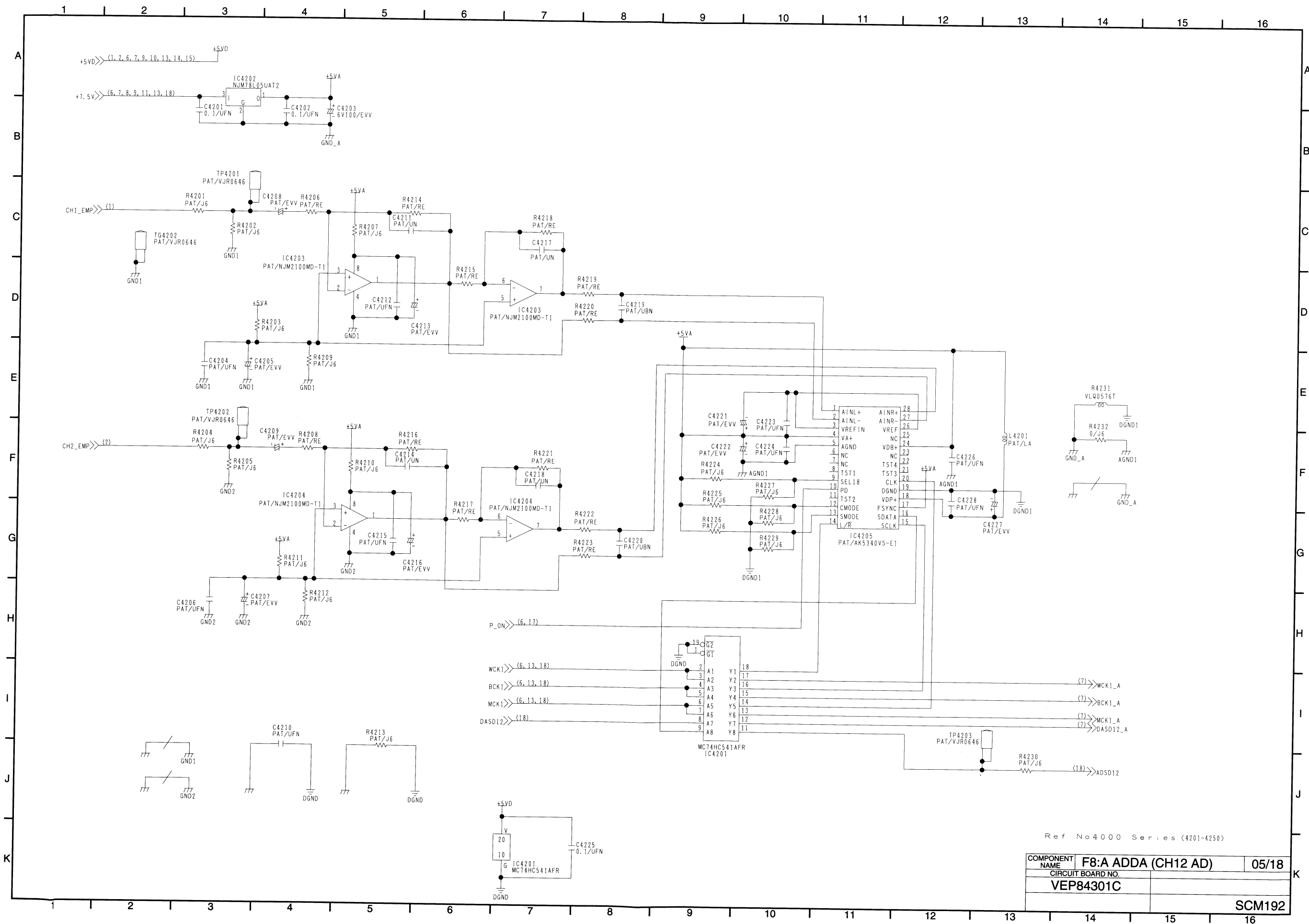




KH4H35(4/18)

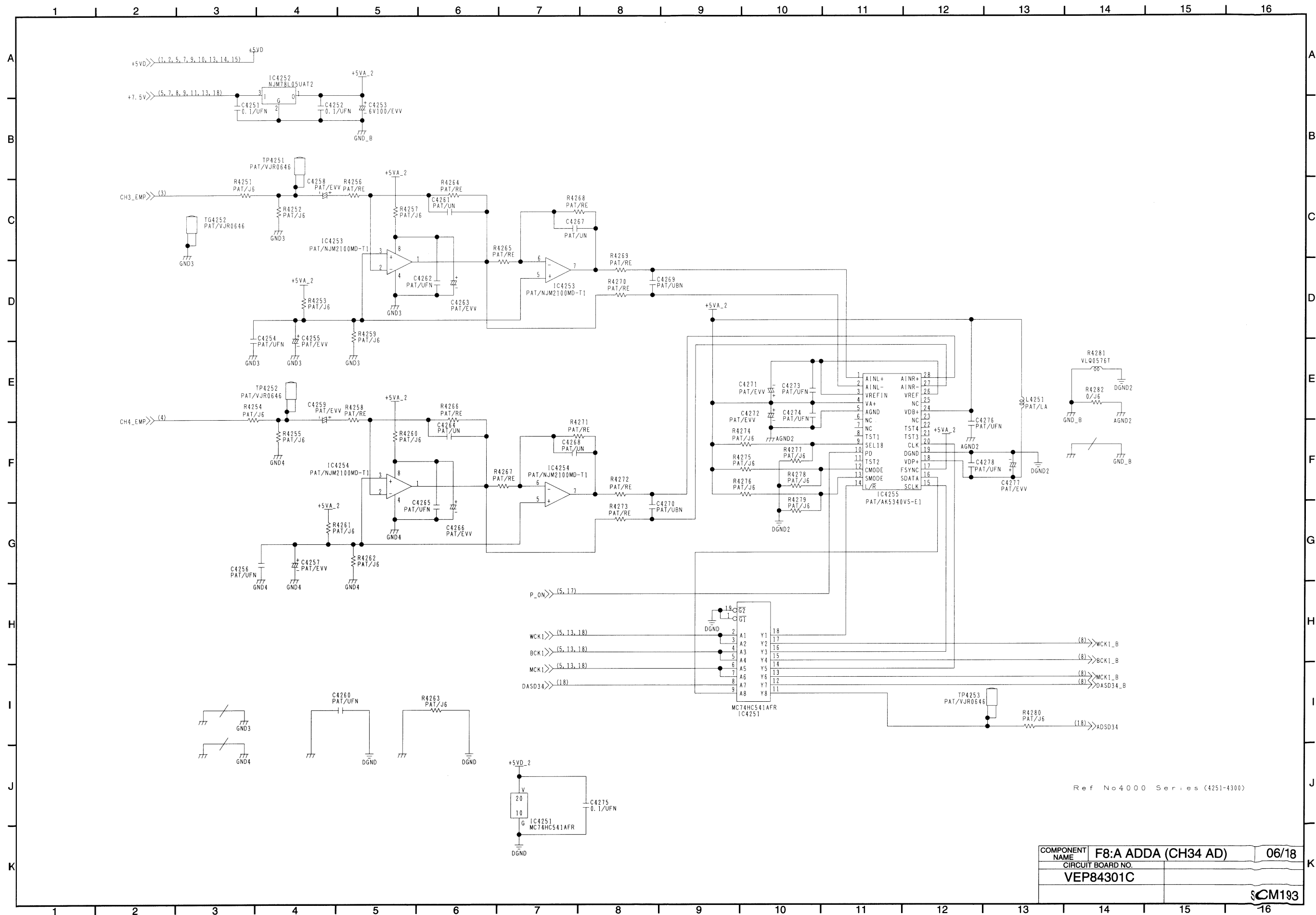


COMPONENT NAME	F8:A ADDA (CH4 INPUT)	04/18
CIRCUIT BOARD NO.	VEP84301C	
		SCM191



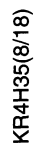
KR4H35(5/18)

KR4H35(6/18)

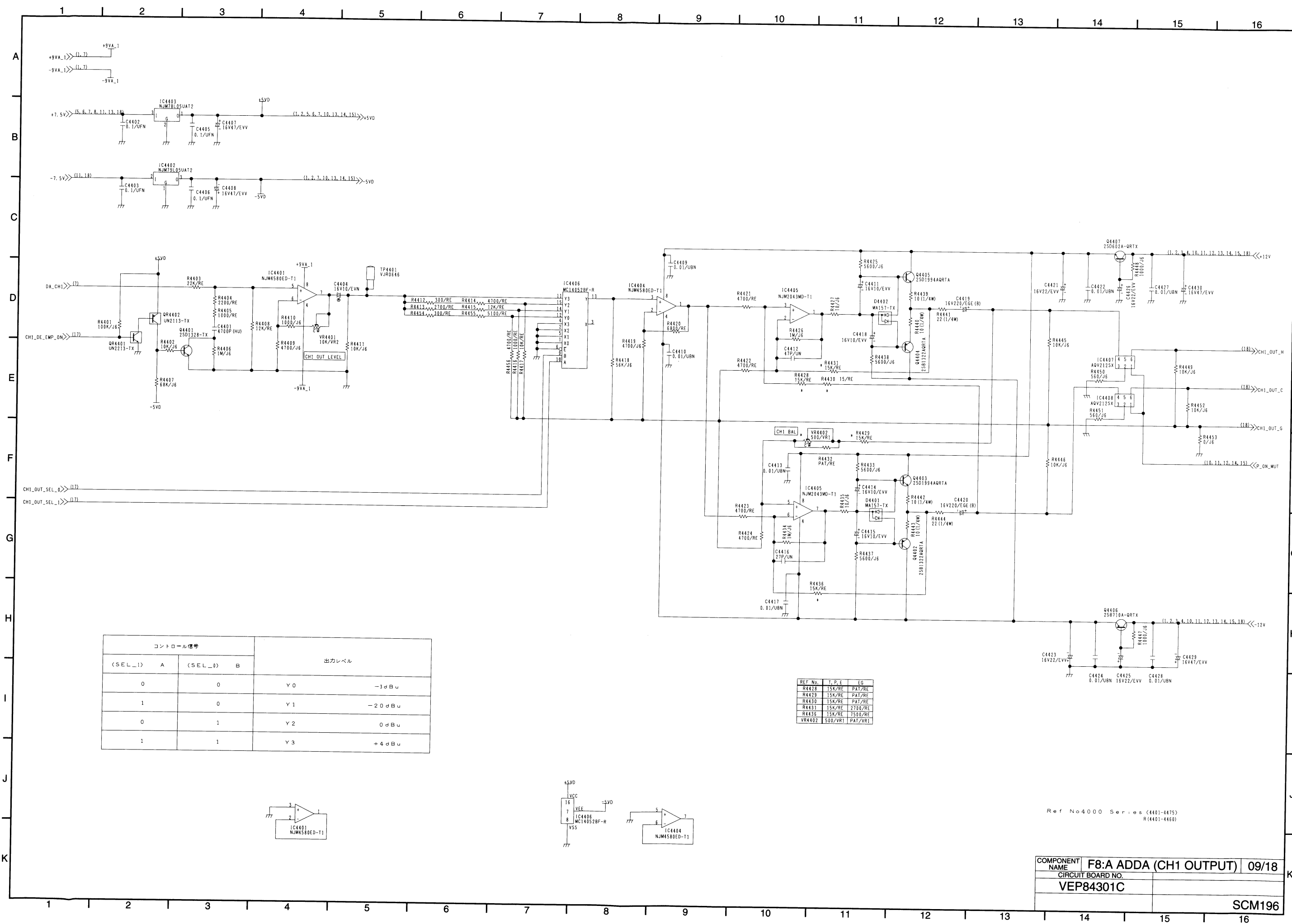


Ref No 4000 Series (4251-4300)

COMPONENT NAME	F8:A ADDA (CH34 AD)	06/18
CIRCUIT BOARD NO.	VEP84301C	
		CM193



COMPONENT NAME	F8:A ADDA (CH34 DA)	08/18
CIRCUIT BOARD NO.		
VEP84301C		
		SCM195



コントロール信号		出力レベル	
(SEL_1)	(SEL_0)		
0	0	Y0	-3dBu
1	0	Y1	-20dBu
0	1	Y2	0dBu
1	1	Y3	+4dBu

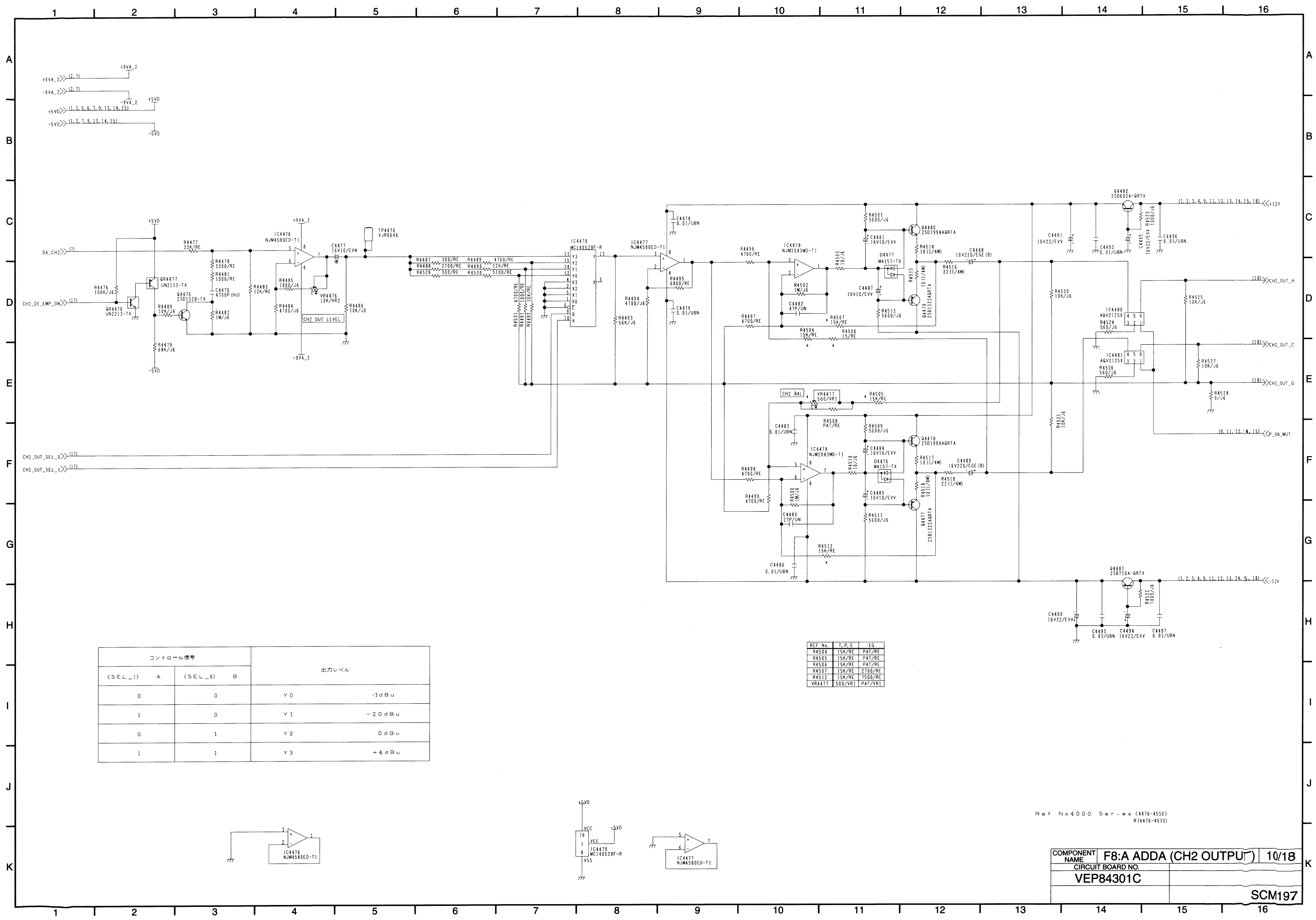
REF No.	T.P.E.	EG
R4428	15K/RE	PAT/RE
R4429	15K/RE	PAT/RE
R4430	15K/RE	PAT/RE
R4431	15K/RE	2700/RE
R4436	15K/RE	7500/RE
VR4402	500/VR1	PAT/VR1

Ref No4000 Series (4401-4475)
R(4401-4460)

COMPONENT NAME	F8:A ADDA (CH1 OUTPUT)	09/18
CIRCUIT BOARD NO.	VEP84301C	
		SCM196

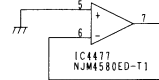
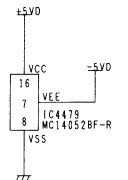
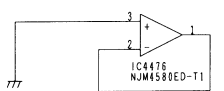
KB4H35(9/18)

KH4H35(10/18)



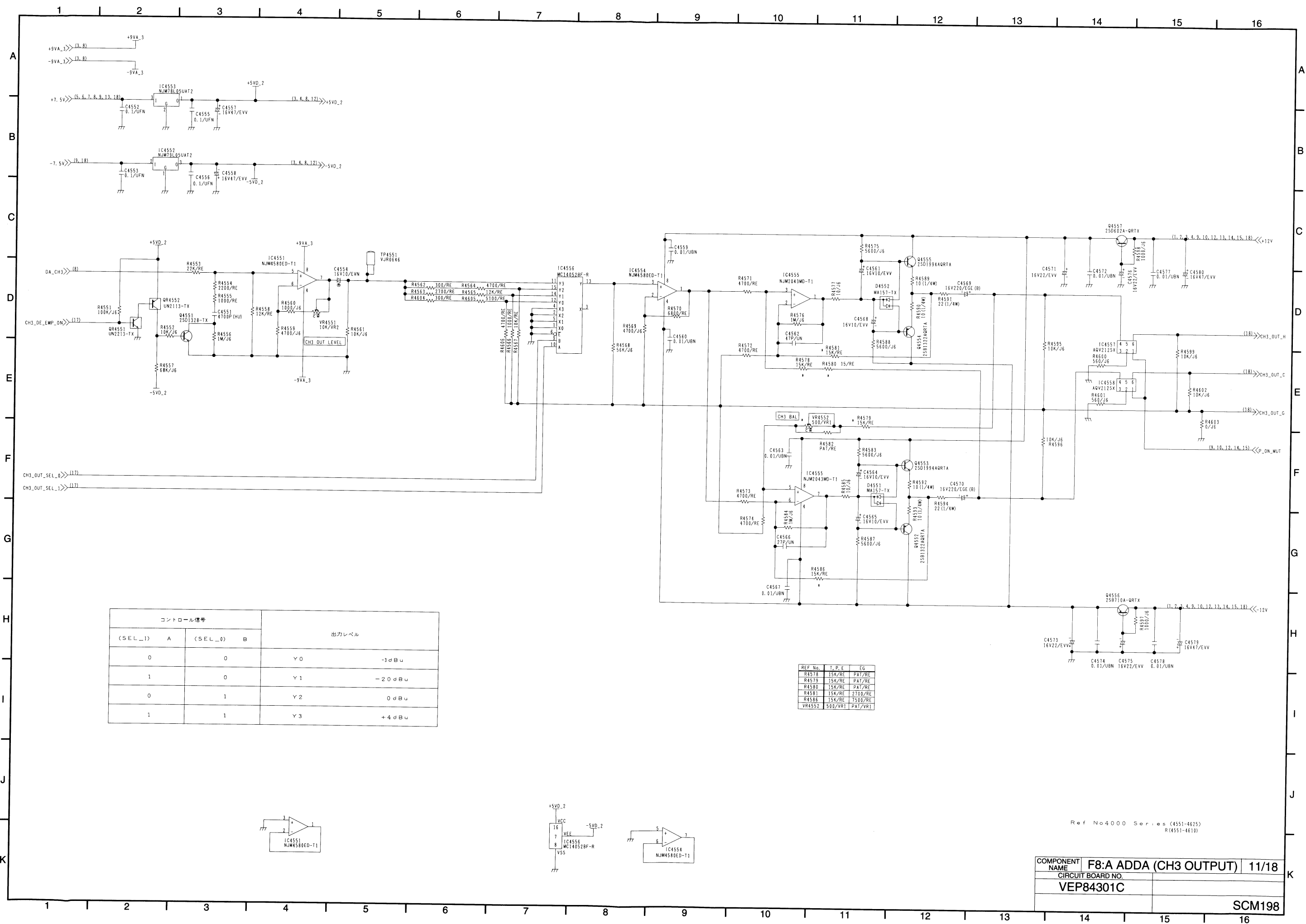
コントロール信号				出力レベル
(SEL_1)	A	(SEL_0)	B	
0		0		Y 0 -3 dB u
1		0		Y 1 -20 dB u
0		1		Y 2 0 dB u
1		1		Y 3 +4 dB u

REF No.	T.P.E	EG
R4504	15K/RE	PAT/RE
R4505	15K/RE	PAT/RE
R4506	15K/RE	PAT/RE
R4507	15K/RE	2700/RE
R4512	15K/RE	1500/RE
VR477	500/VR1	PAT/VR1

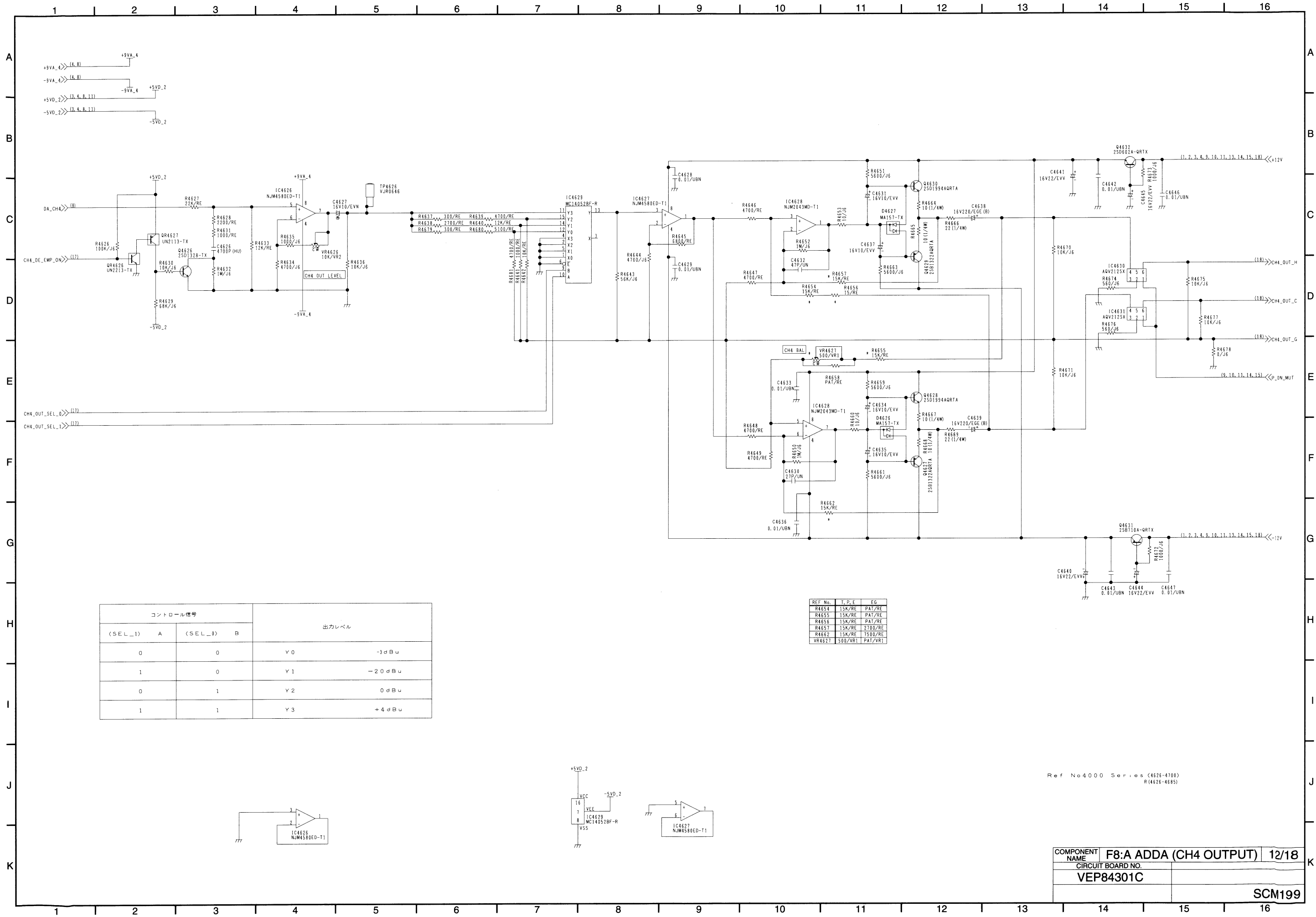


Ref No4000 Series (4476-4550)
R (4476-4535)

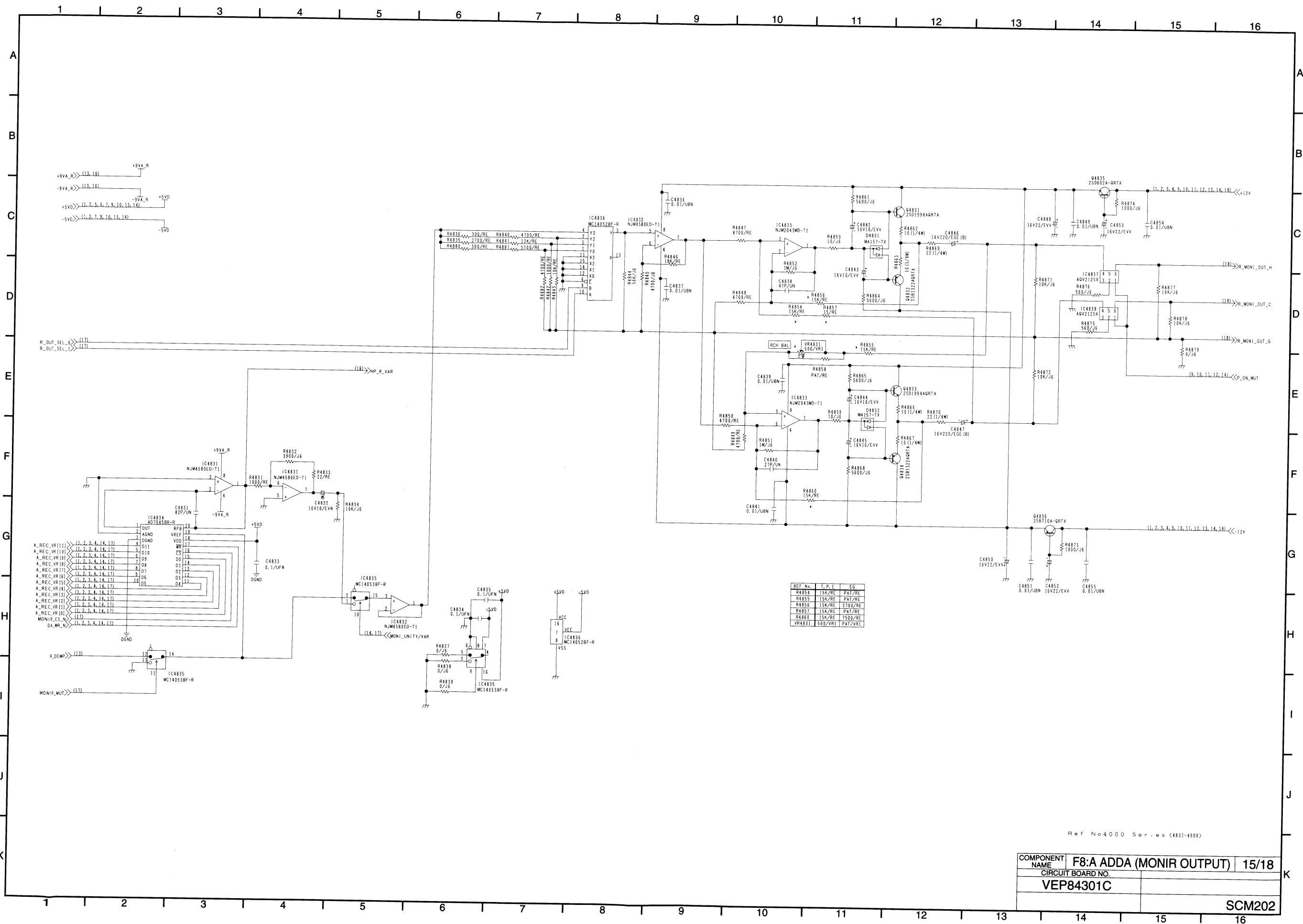
COMPONENT NAME	F8:A ADDA (CH2 OUTPUT)	10/18
CIRCUIT BOARD NO.	VEP84301C	
		SCM197



KR4H35(12/18)



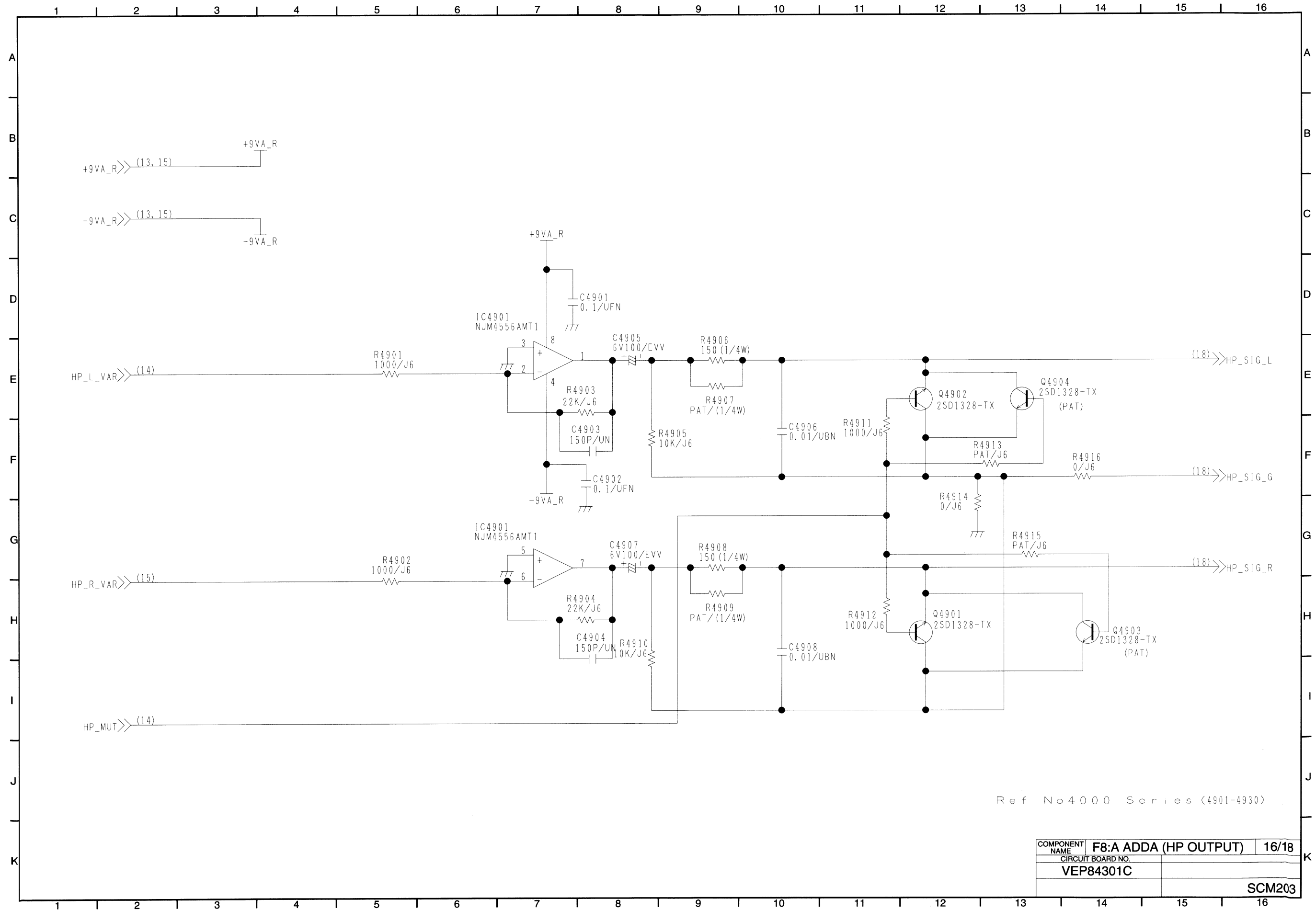




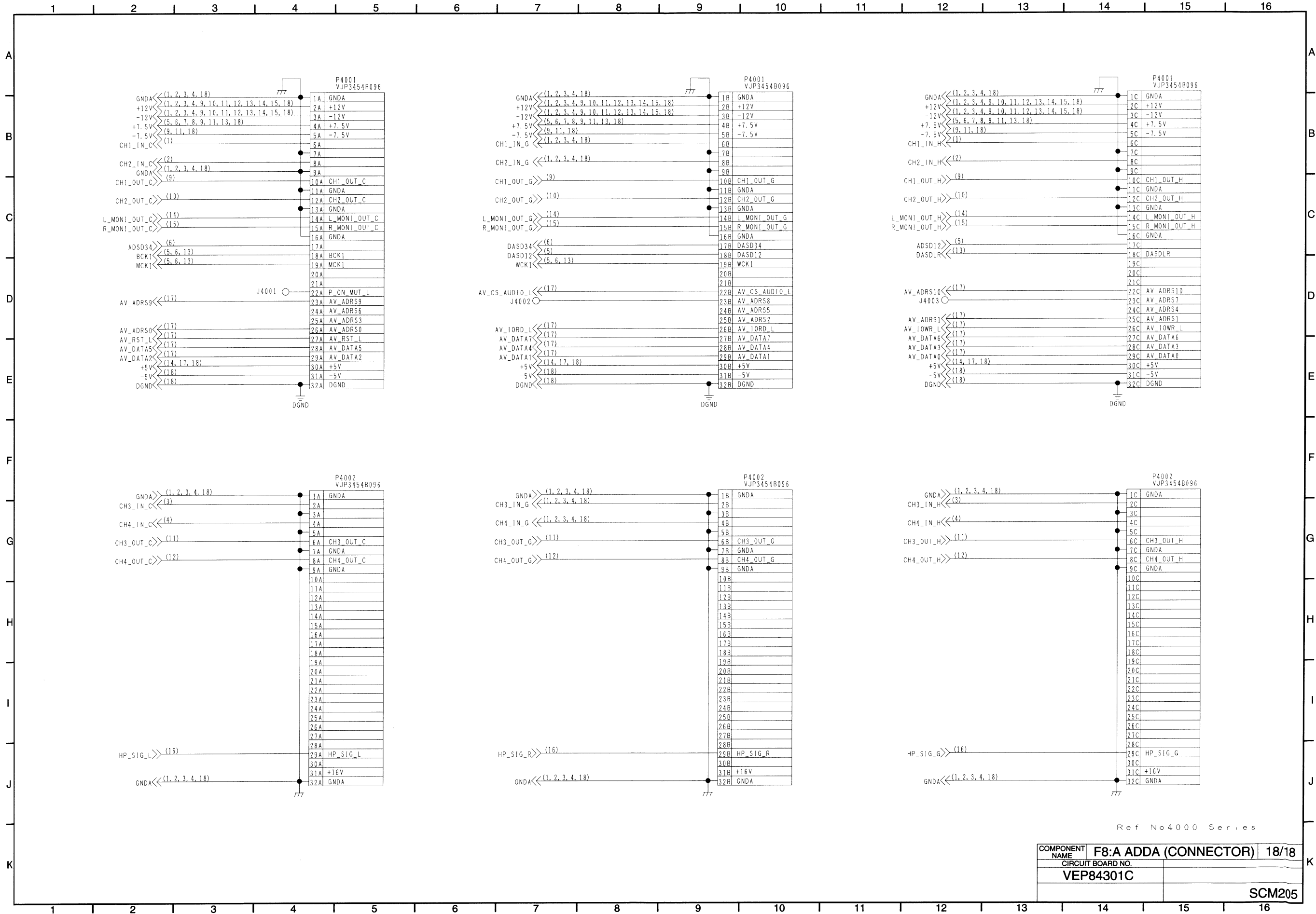
Ref No 4000 Series (4831-4900)

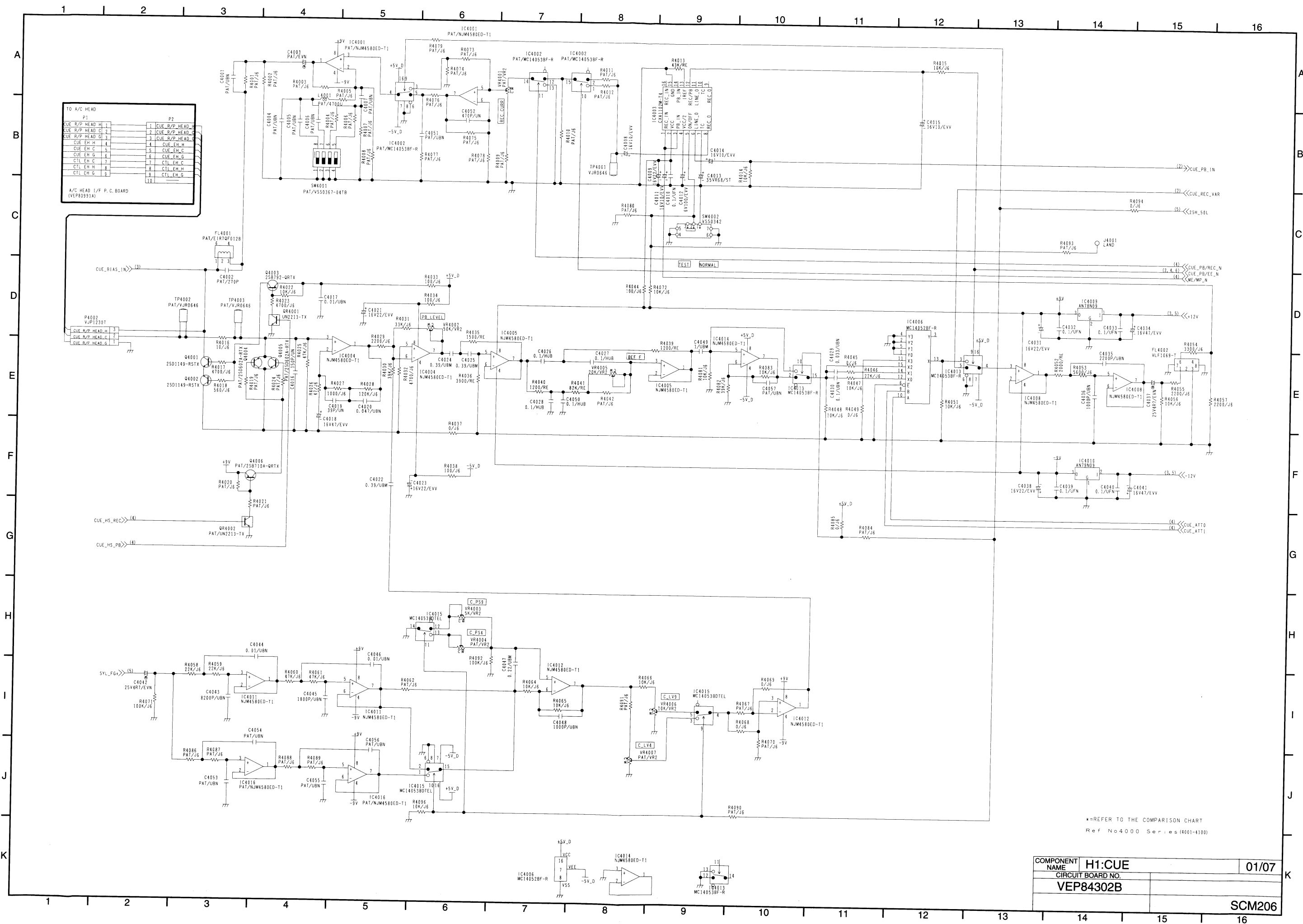
COMPONENT NAME	F8:A ADDA (MONIR OUTPUT)	15/18
CIRCUIT BOARD NO.	VEP84301C	
SCM202		

KR4H35(16/18)



KP4H35(18/18)

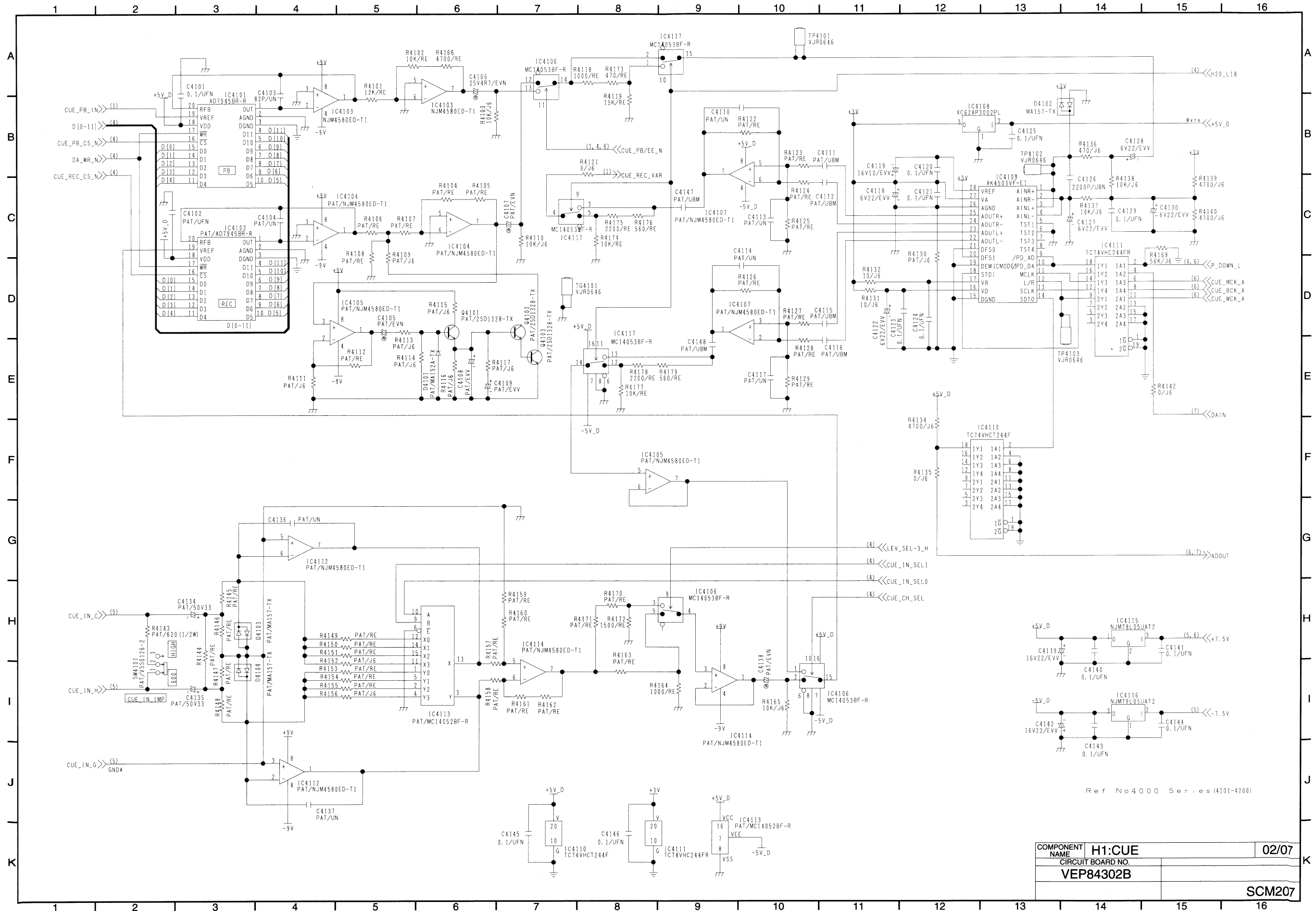




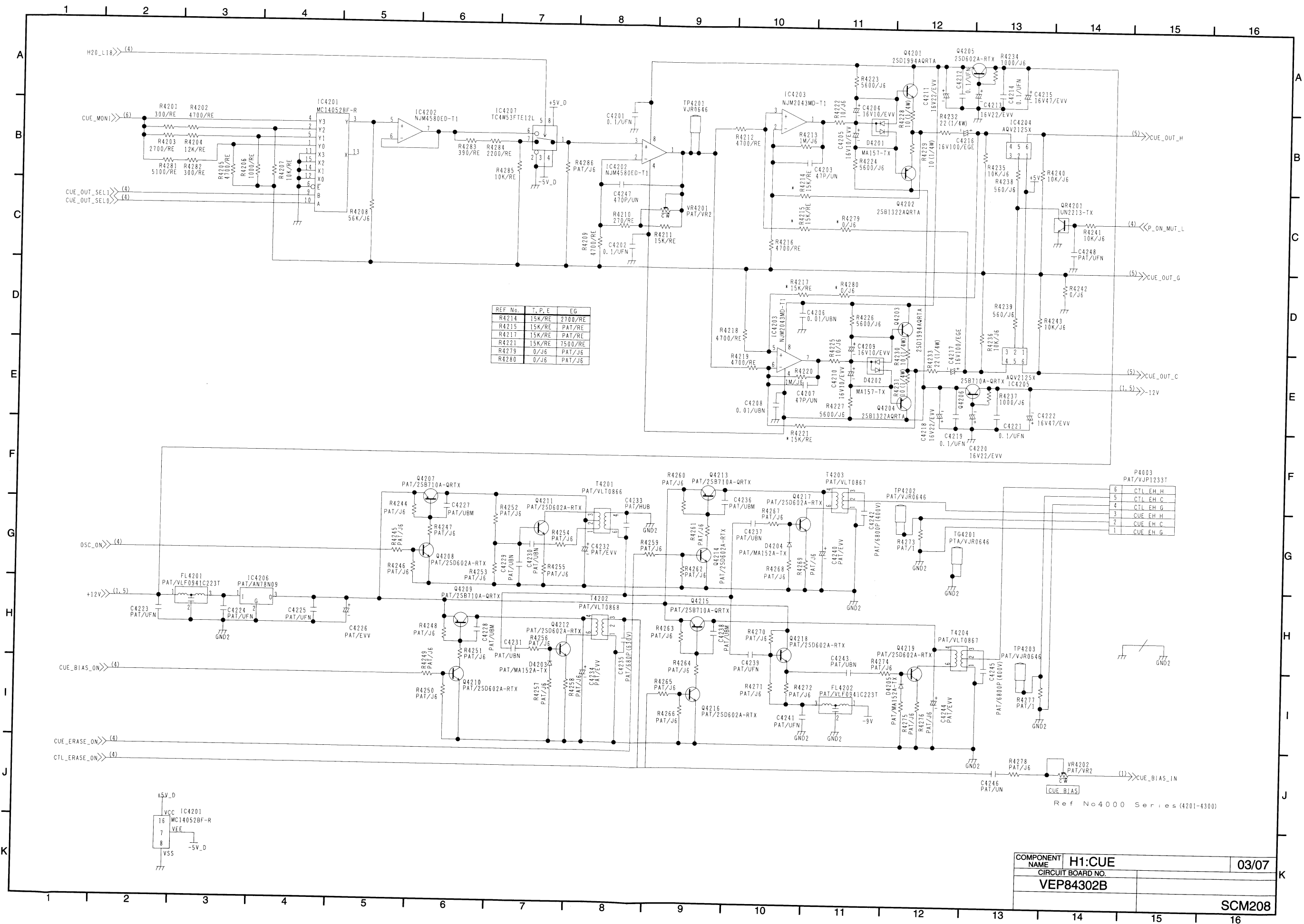
*=REFER TO THE COMPARISON CHART
Ref No 4000 Series (4001-4100)

COMPONENT NAME	H1:CUE	01/07
CIRCUIT BOARD NO.		
VEP84302B		
		SCM206

KR4H36(2/7)

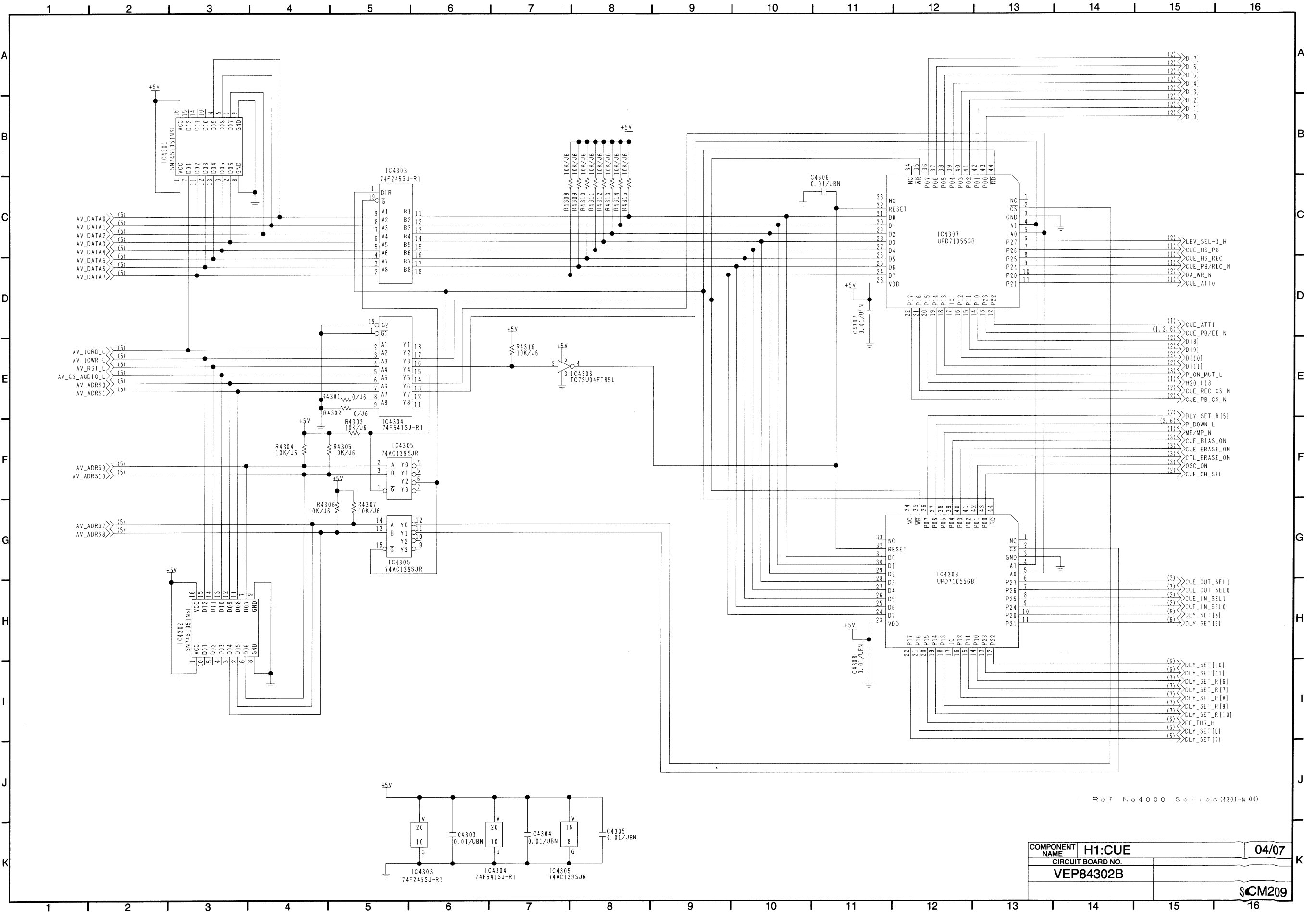


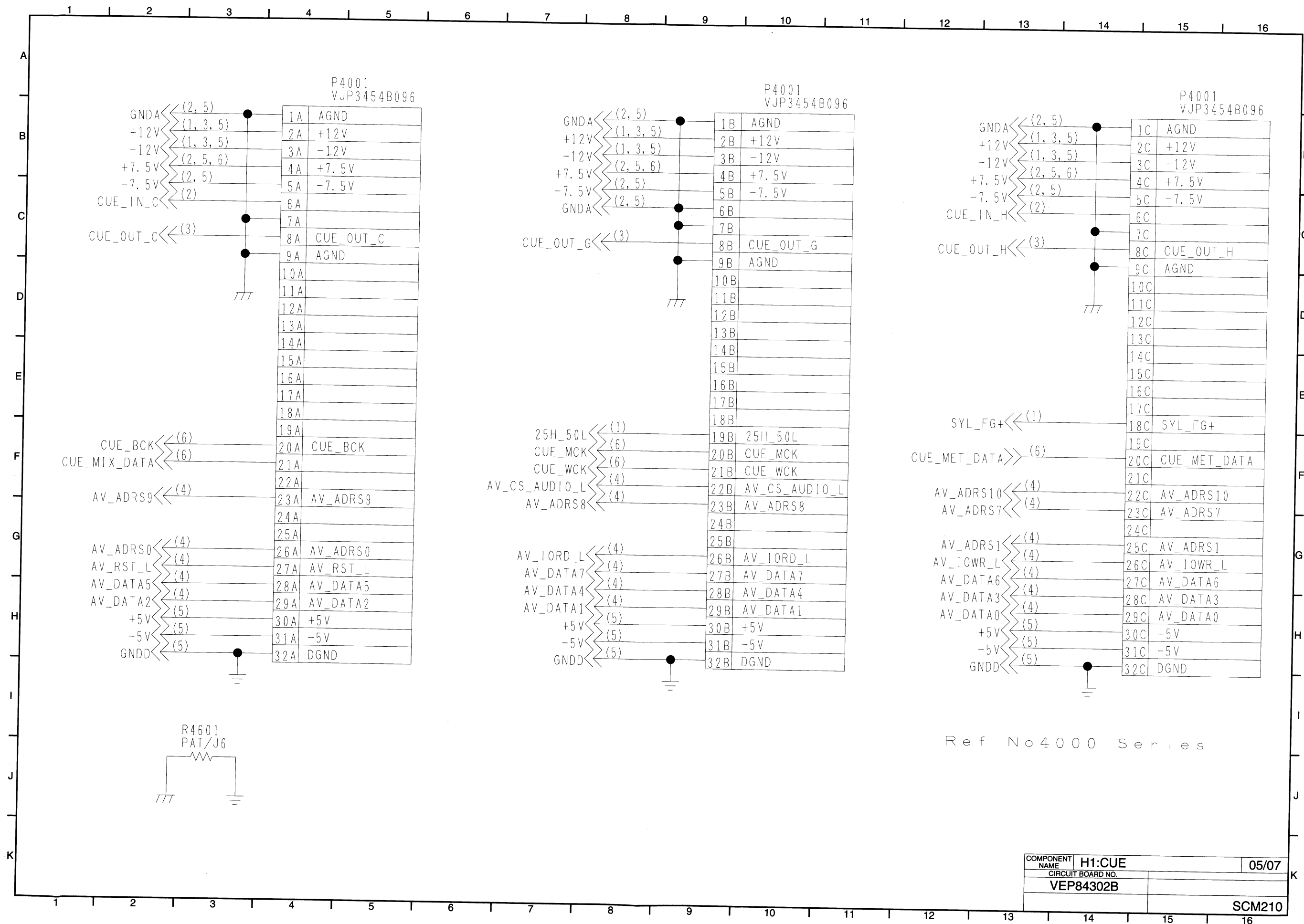
COMPONENT NAME	H1:CUE	02/07
CIRCUIT BOARD NO.	VEP84302B	
SCM207		



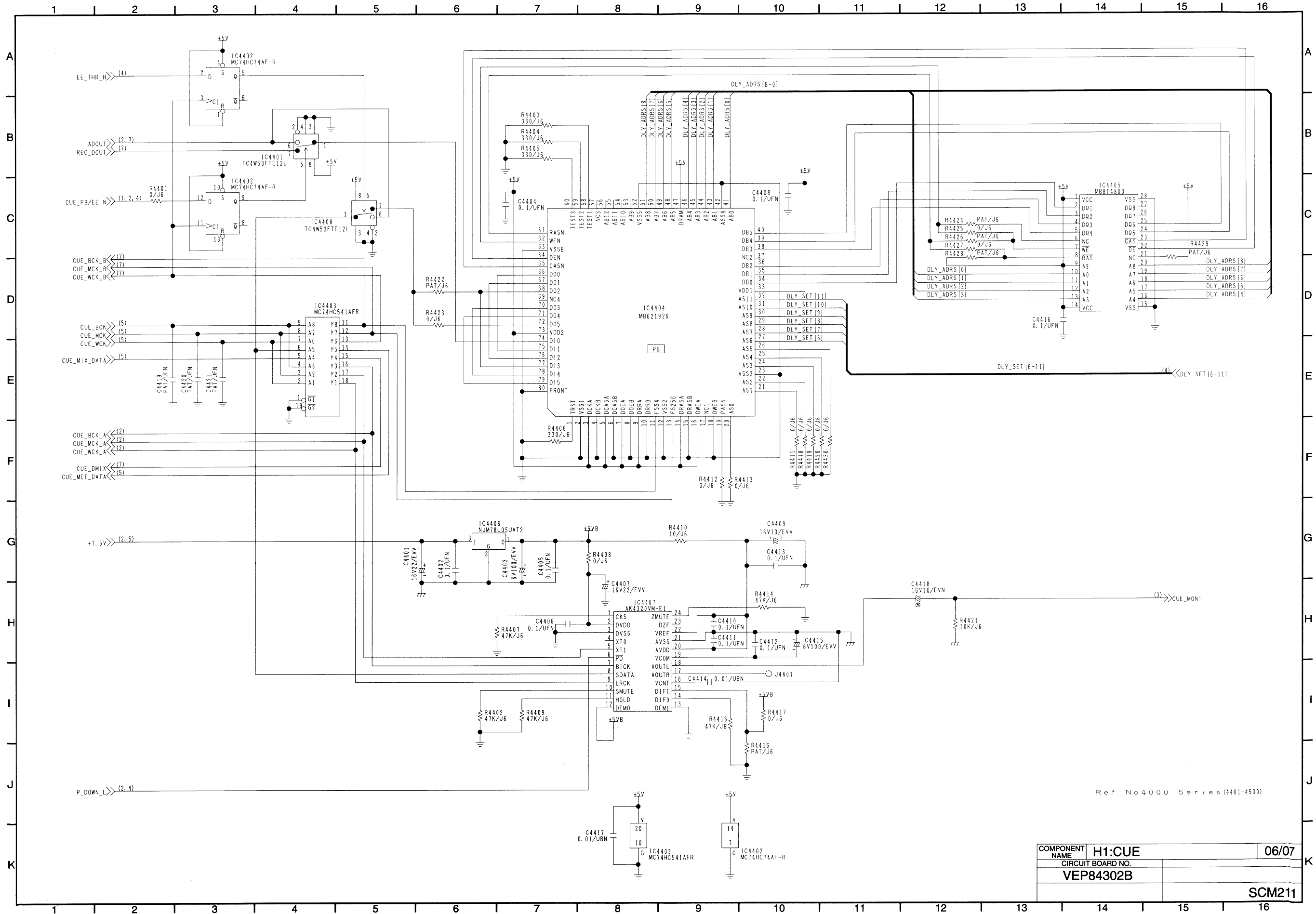
KR4H36(3/7)

KR4H36(4/7)

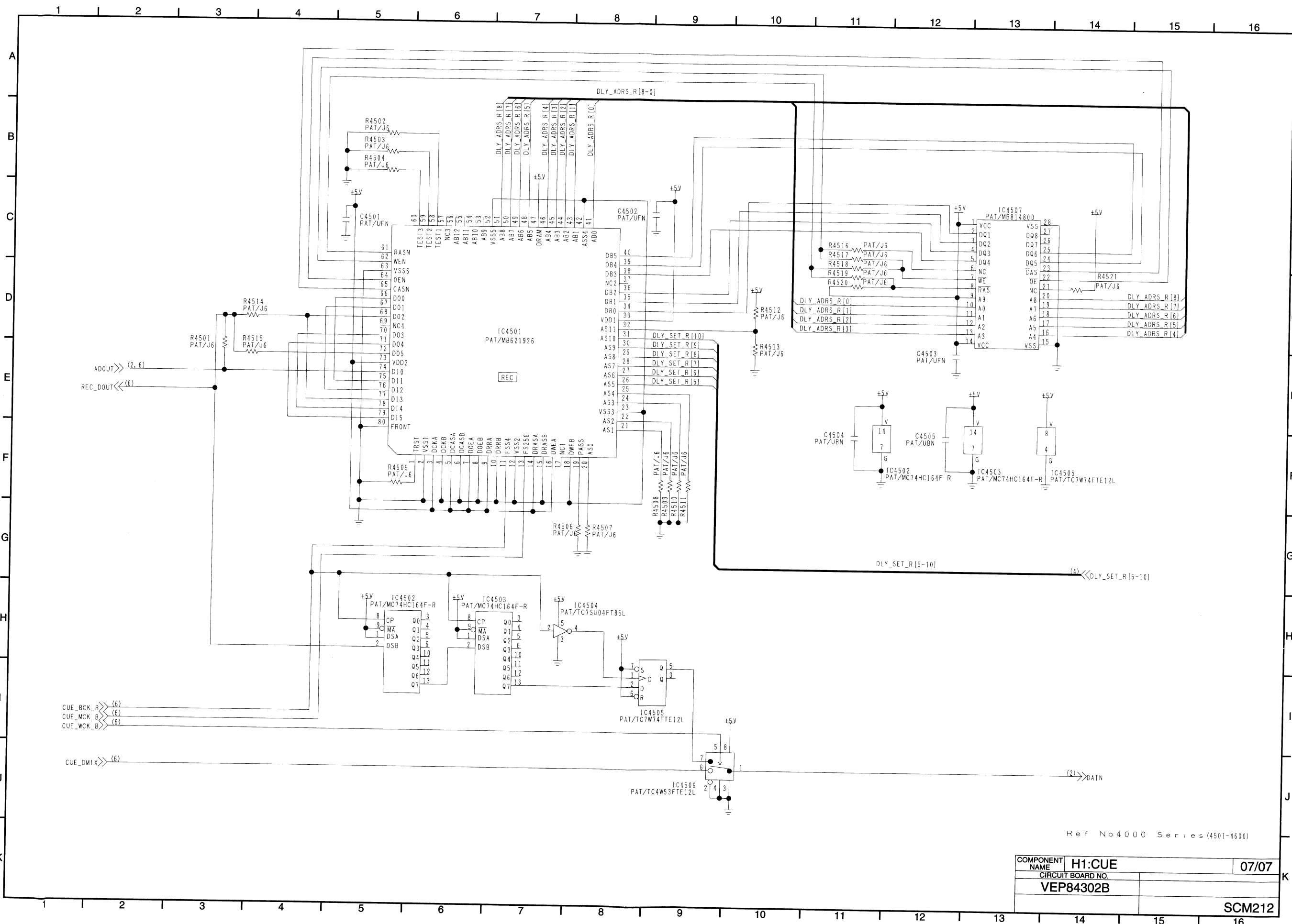




KR4H36(6/7)



COMPONENT NAME	H1:CUE	06/07
CIRCUIT BOARD NO.	VEP84302B	
		SCM211



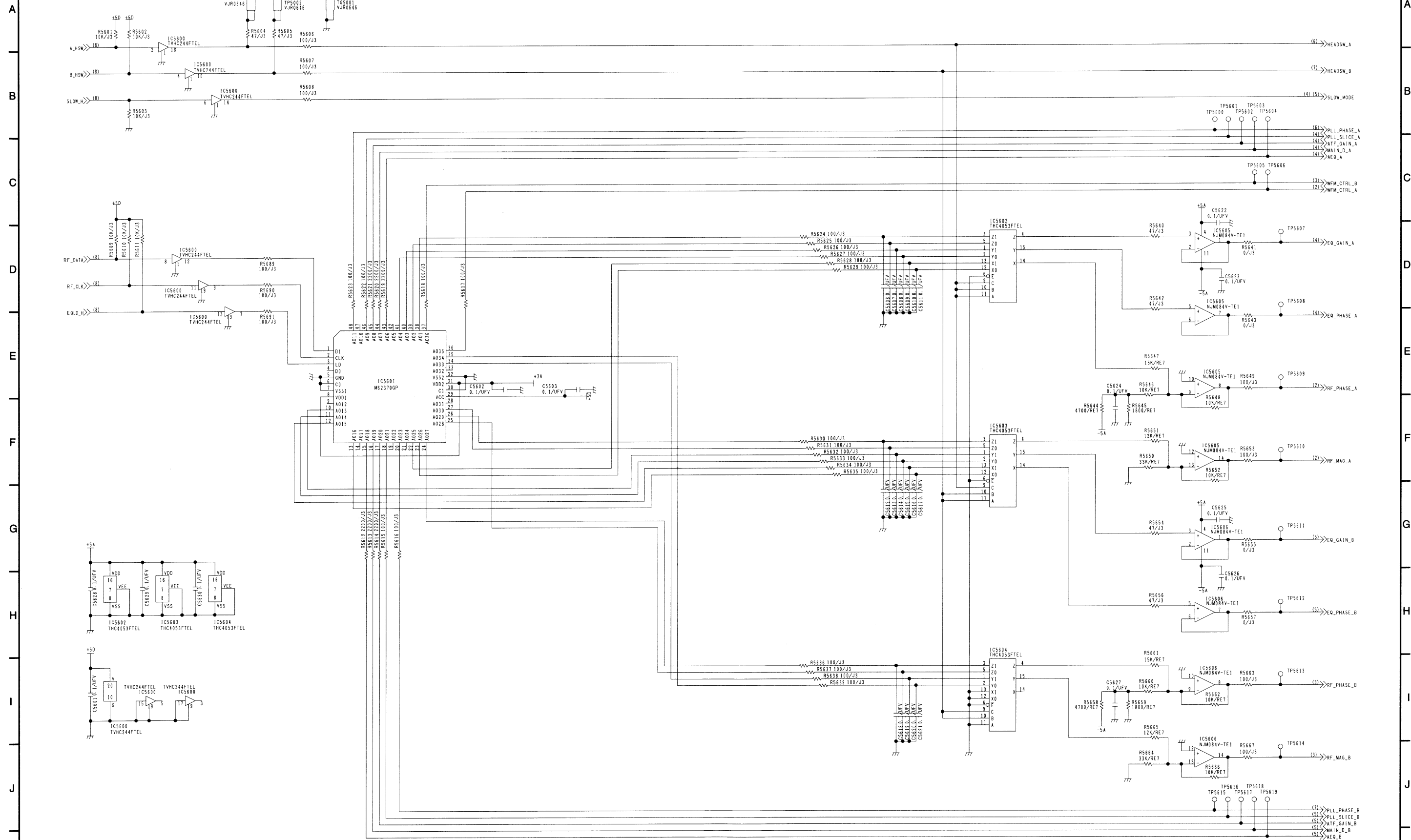
Ref No4000 Series (4501-4500)

COMPONENT NAME	H1:CUE	07/07
CIRCUIT BOARD NO.	VEP84302B	
		SCM212

KR4H36(7/7)

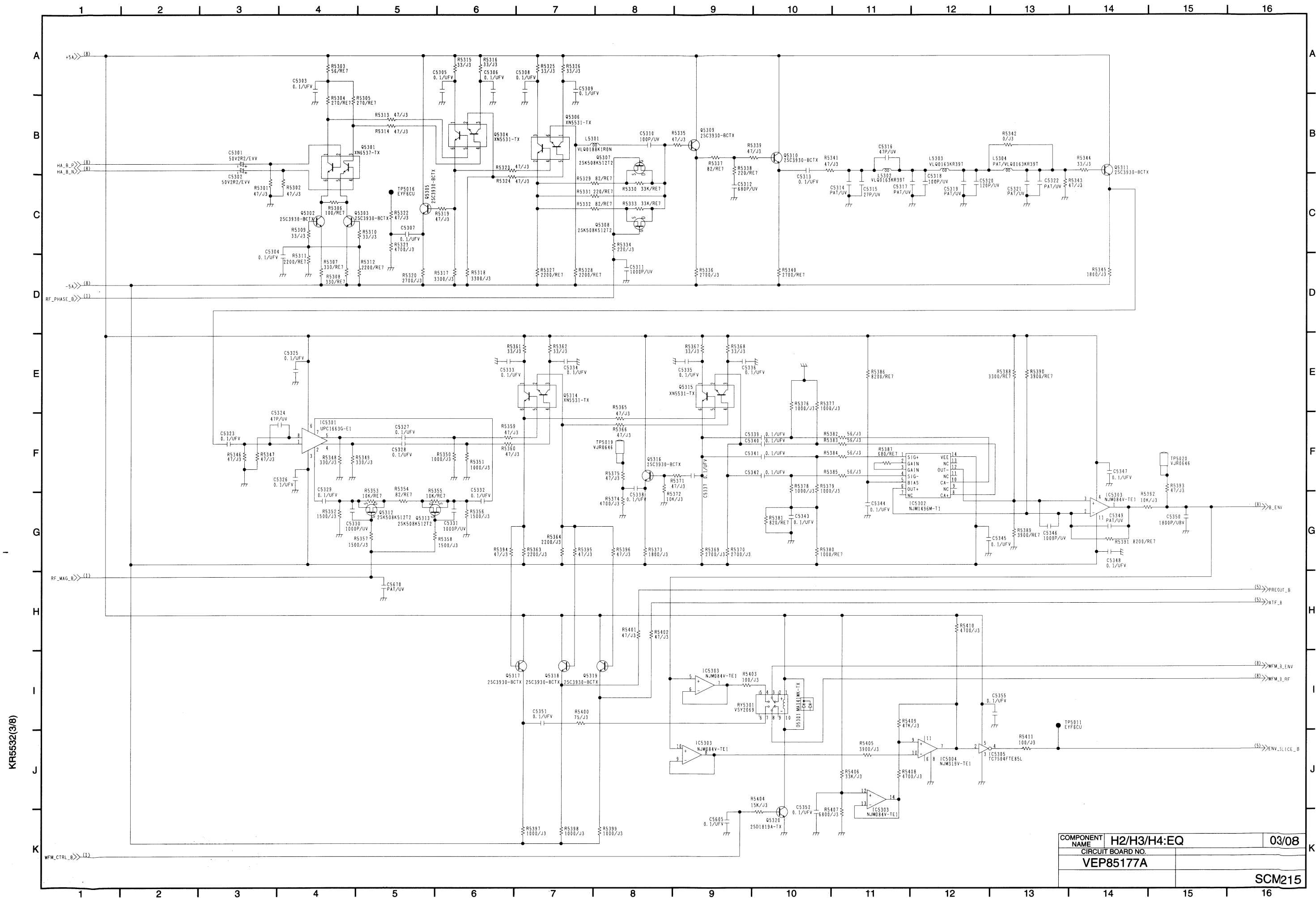
KR5532(1/8)

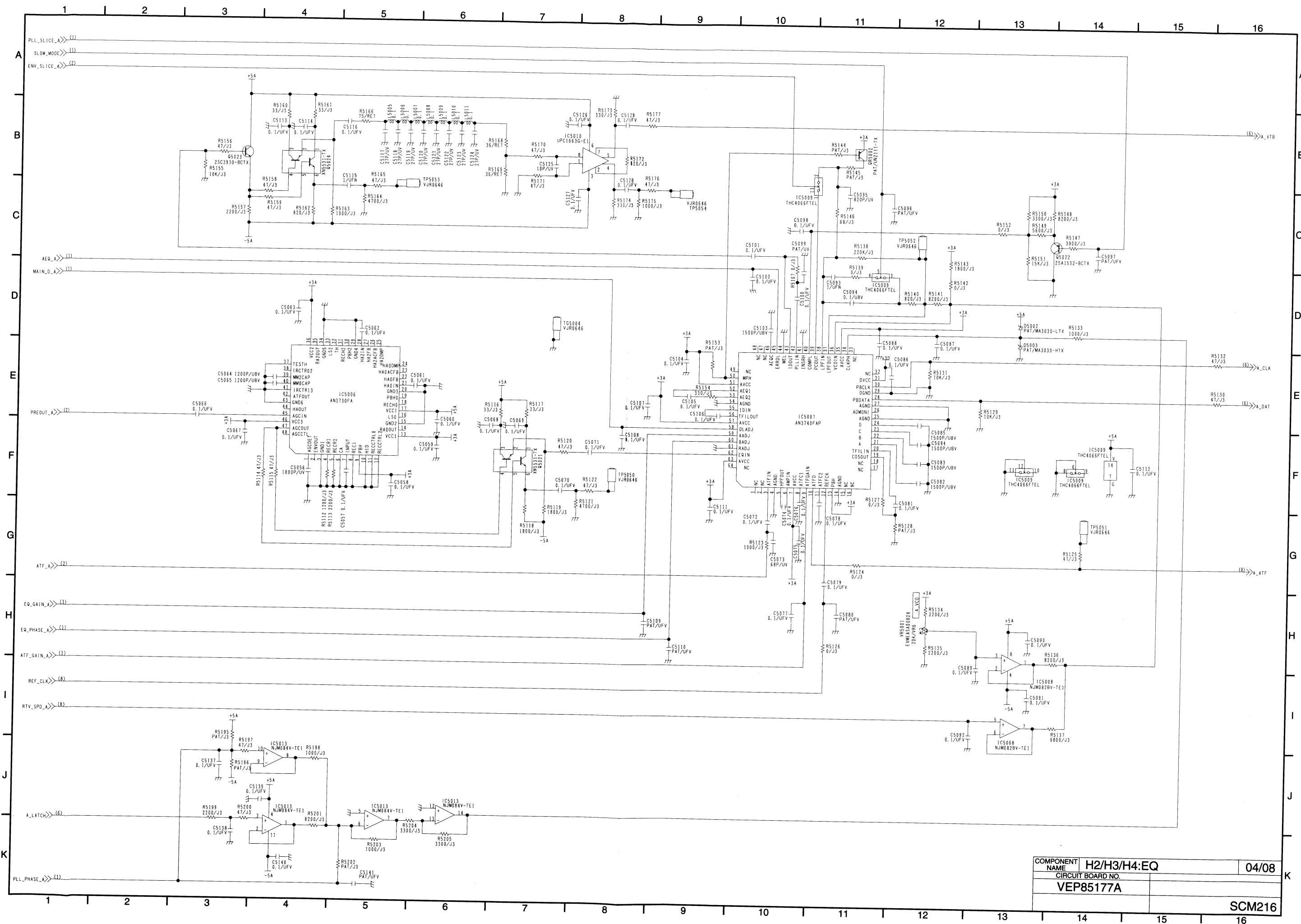
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

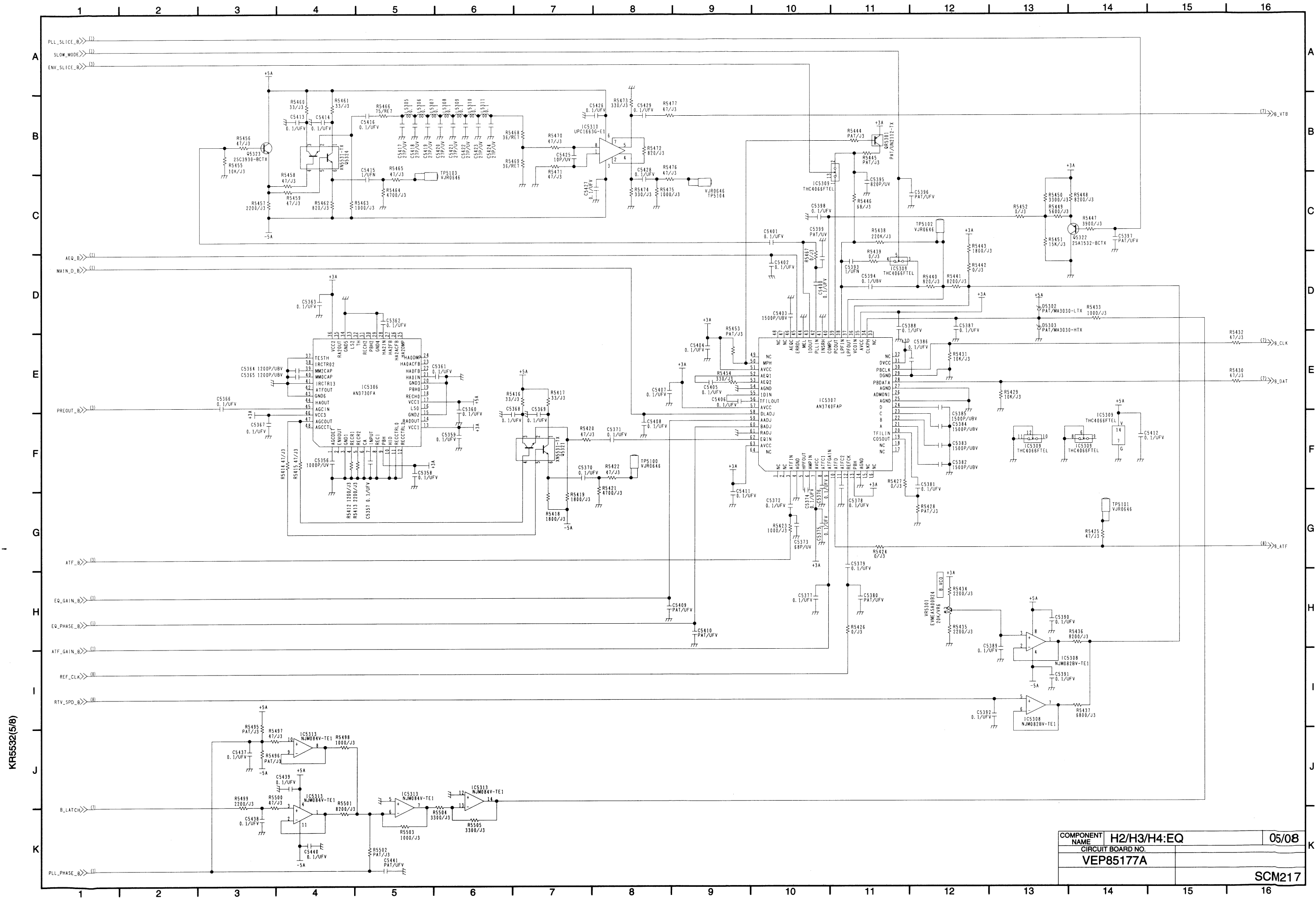


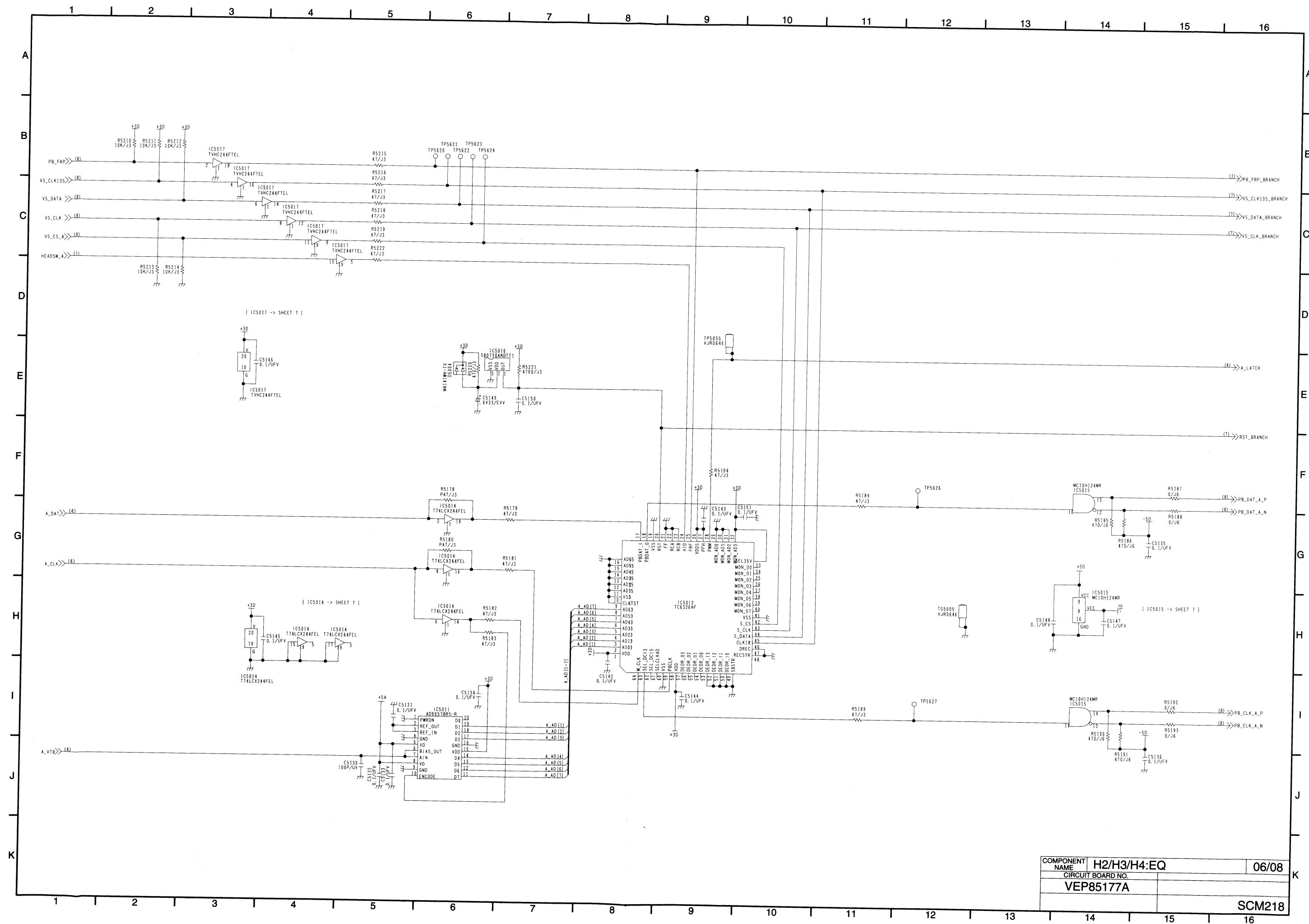
COMPONENT NAME	H2/H3/H4:EQ	01/08
CIRCUIT BOARD NO.	VEP85177A	
		SCM213

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

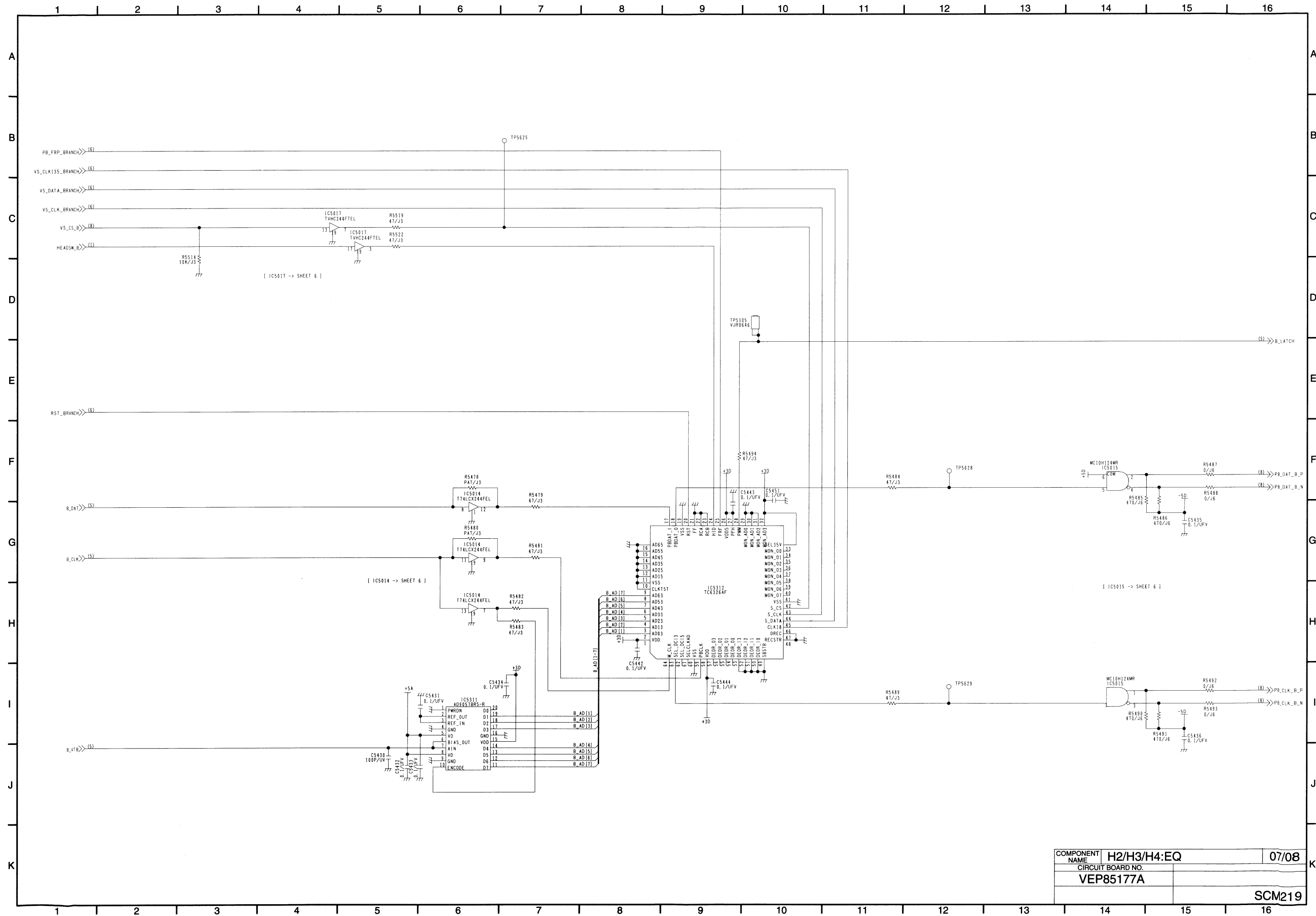




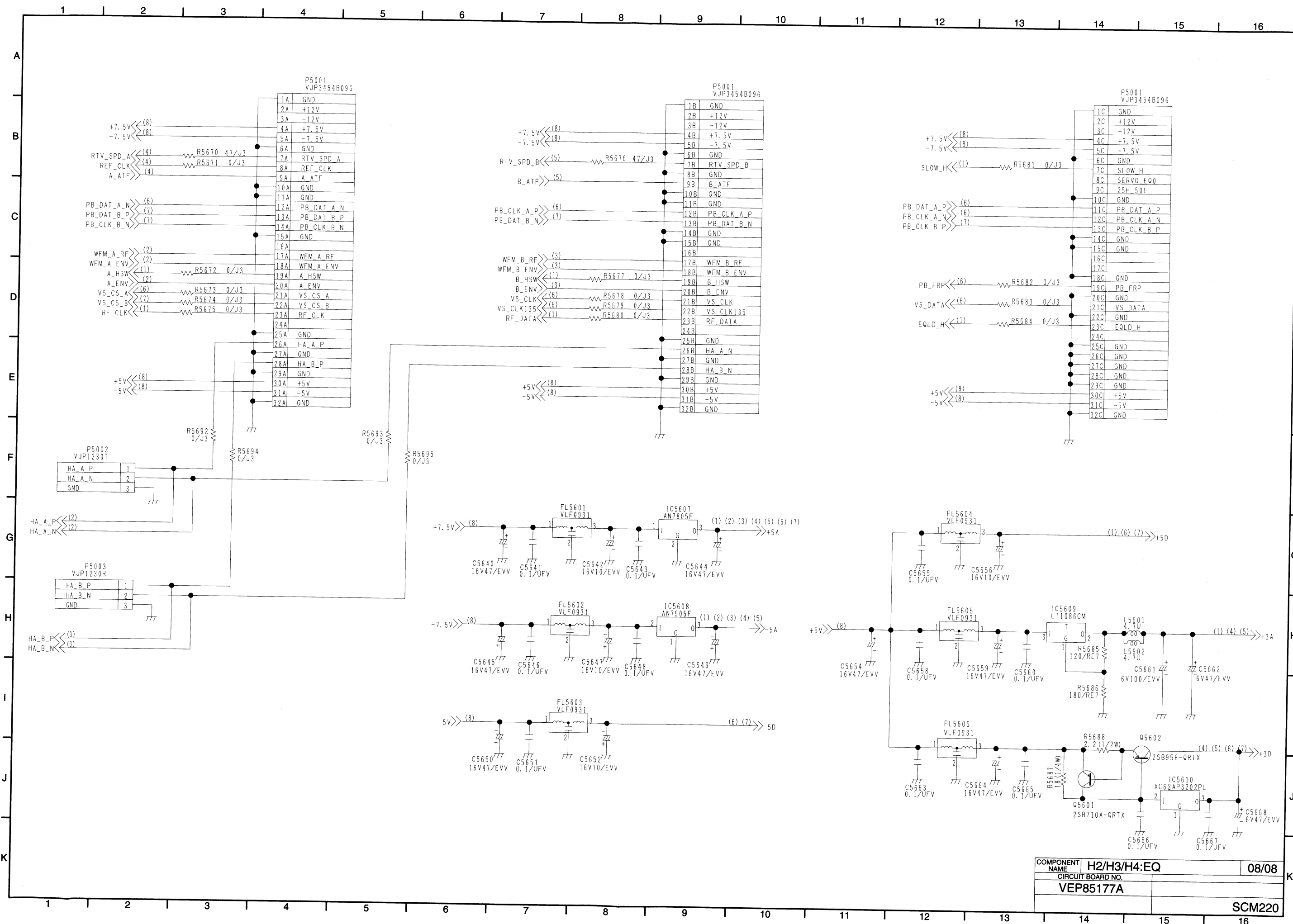


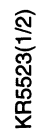


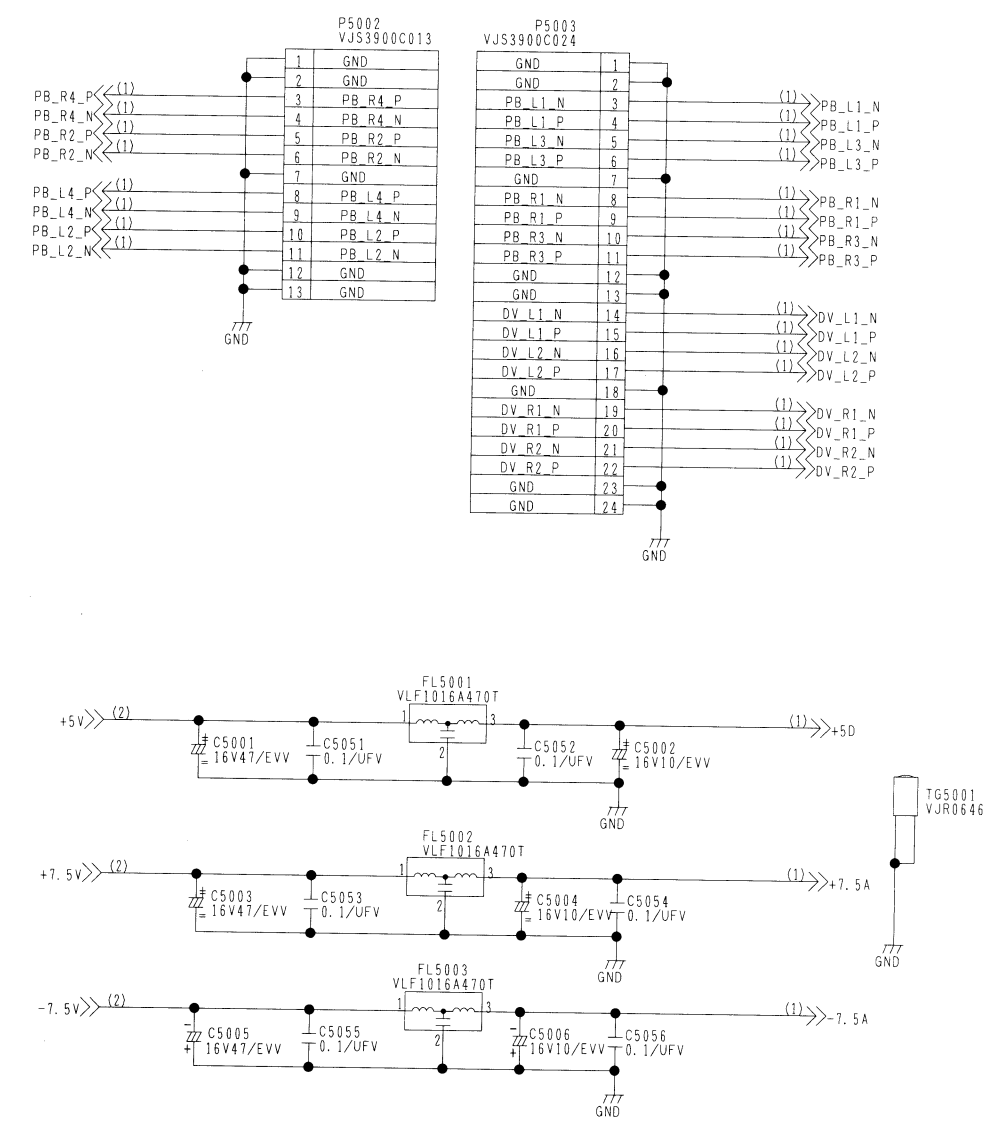
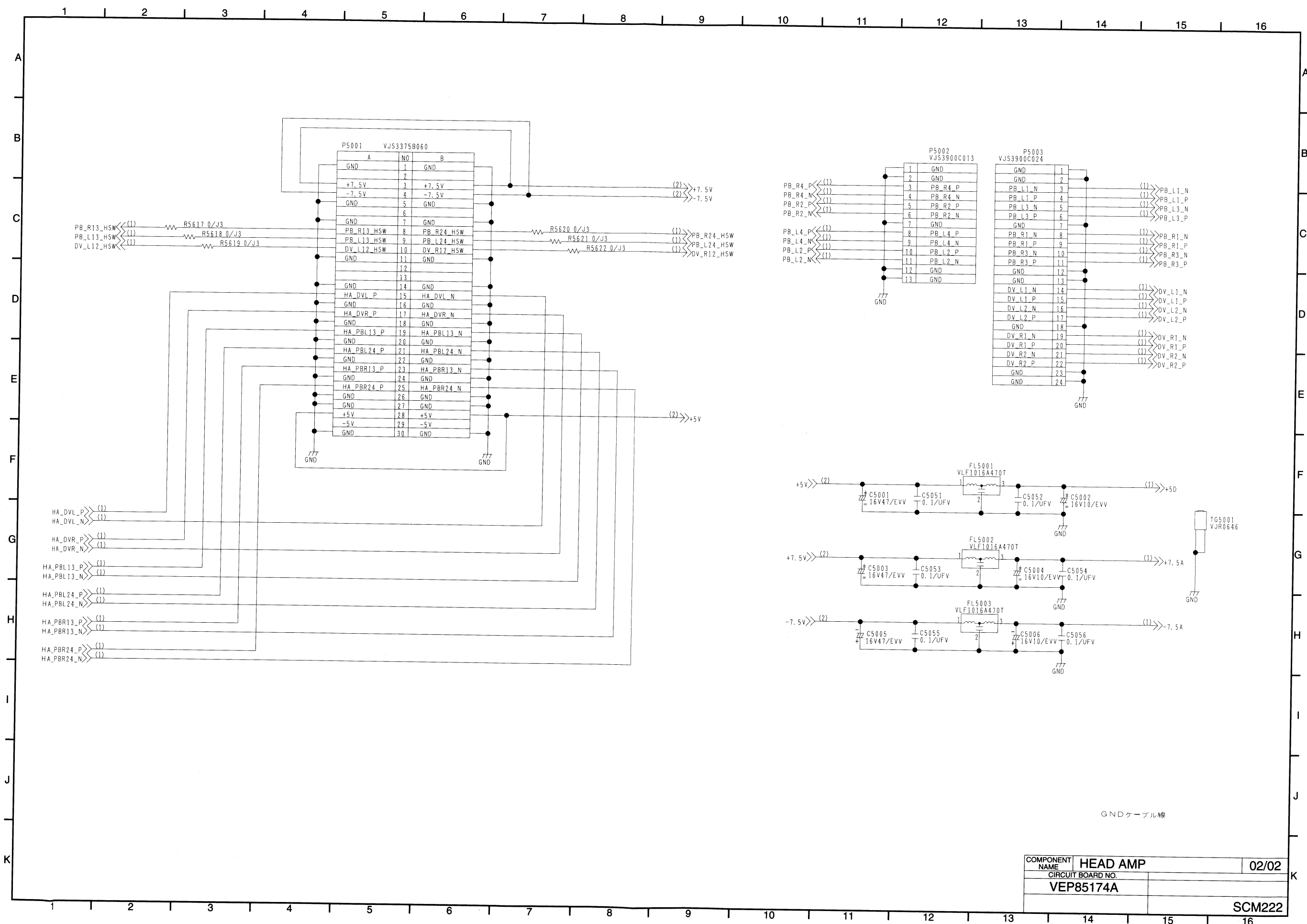
KR5532(7/8)



COMPONENT NAME	H2/H3/H4:EQ	07/08
CIRCUIT BOARD NO.	VEP85177A	
		SCM219

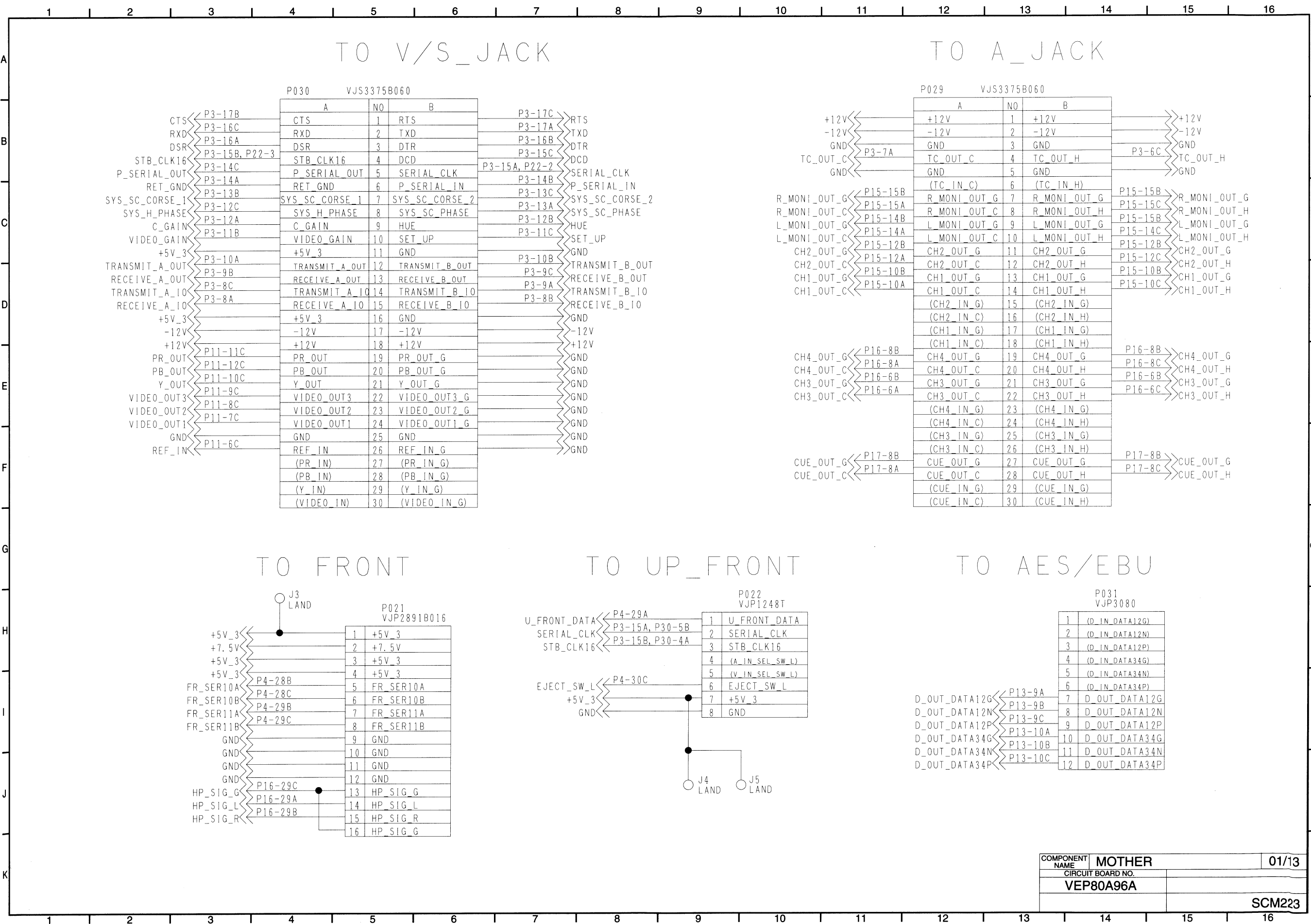






GNDケーブル線

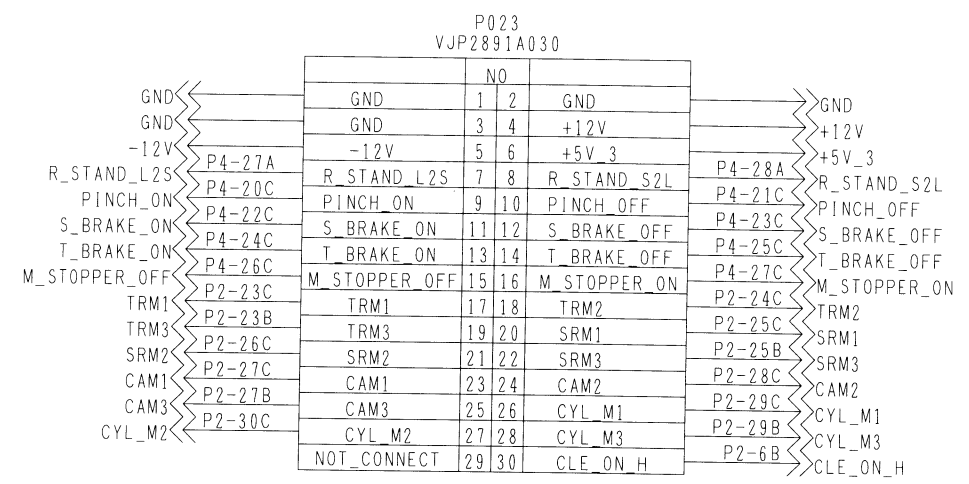
COMPONENT NAME	HEAD AMP	02/02
CIRCUIT BOARD NO.	VEP85174A	
		SCM222



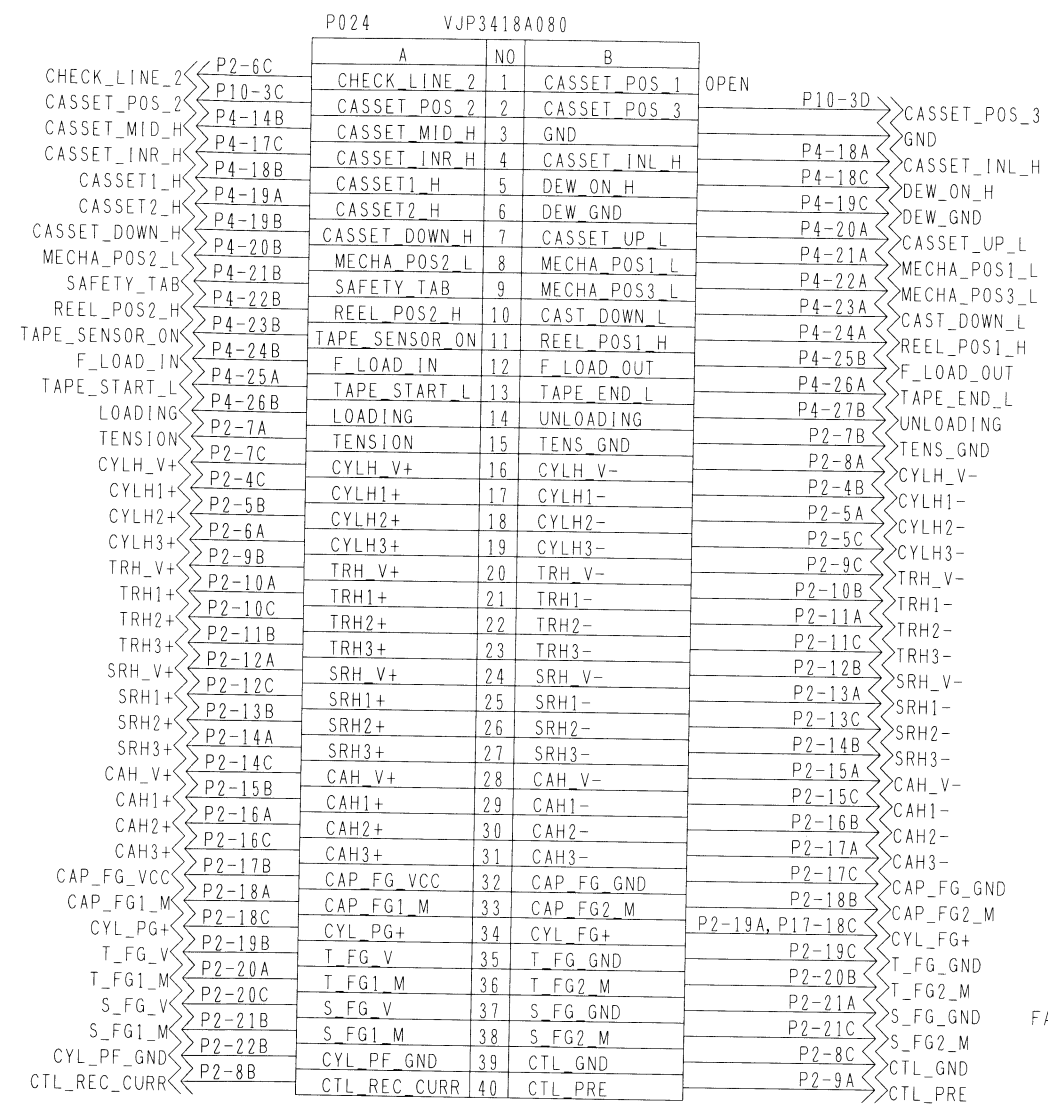
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
B
C
D
E
F
G
H
I
J
K

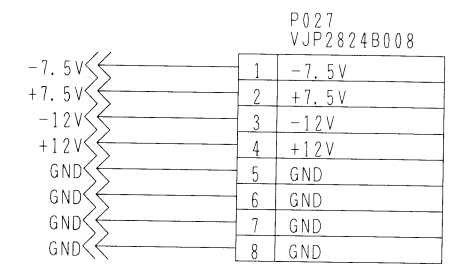
TO M_IF



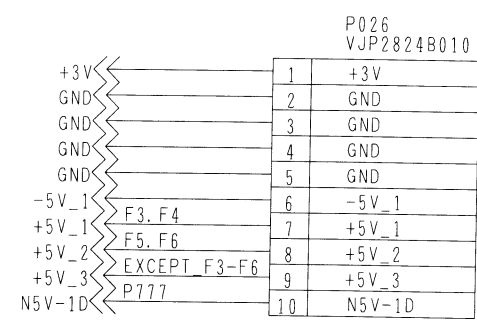
TO M_IF



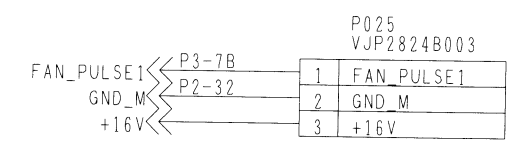
TO POWER



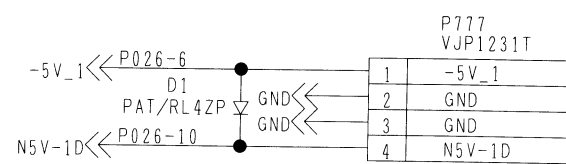
TO POWER



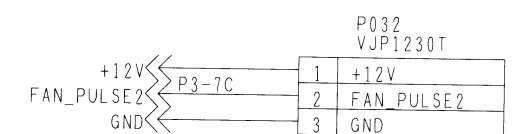
TO POWER



TO N5_ADJ_PCB



TO FAN_MOTOR



COMPONENT NAME	MOTHER	02/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM224

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

F1

SERVO

SERVO

P001 VJS3814	
GND	1A GND
+12V	2A +12V
-12V	3A -12V
+7.5V	4A +7.5V
-7.5V	5A -7.5V
GND	6A GND
PB_L13_ATF	7A GND
DV_R_ATF	8A PB_L13_ATF
DV_R_ENV	9A DV_R_ATF
FP_S0	10A DV_R_ENV
P6-10C	11A FP_S0
P6-9A	12A NC(4FP_S0)
TRP0	13A PFP0
TSR	14A SLOW_H
PB_L13_ENV	15A TRP0
PB_L24_HSW	16A TSR
P6-5G, P19-18B, P33-8B	17A PB_L13_ENV
P6-5G, P19-18B, P33-8B	18A PB_L24_HSW
P6-5G, P19-18B, P33-8B	19A (CAP_FG_RECPR)
P6-5G, P19-18B, P33-8B	20A TXD_SV
P6-5G, P19-18B, P33-8B	21A 25H_50L
P6-5G, P19-18B, P33-8B	22A SYS_AB2
P6-5G, P19-18B, P33-8B	23A SYS_AB3
P6-5G, P19-18B, P33-8B	24A SYS_AB4
P6-5G, P19-18B, P33-8B	25A SYS_AB5
P6-5G, P19-18B, P33-8B	26A SYS_AB6
P6-5G, P19-18B, P33-8B	27A SYS_AB7
P6-5G, P19-18B, P33-8B	28A SYS_AB8
P6-5G, P19-18B, P33-8B	29A SYS_AB9
P6-5G, P19-18B, P33-8B	30A SYS_AB10
P6-5G, P19-18B, P33-8B	31A SYS_DB1
P6-5G, P19-18B, P33-8B	32A SYS_DB2
P6-5G, P19-18B, P33-8B	33A SYS_DB3
P6-5G, P19-18B, P33-8B	34A SYS_DB4
P6-5G, P19-18B, P33-8B	35A SYS_DB5
P6-5G, P19-18B, P33-8B	36A SYS_DB6
P6-5G, P19-18B, P33-8B	37A SYS_DB7
P6-5G, P19-18B, P33-8B	38A SYS_DB8
P6-5G, P19-18B, P33-8B	39A SYS_DB9
P6-5G, P19-18B, P33-8B	40A SYS_DB10
P6-5G, P19-18B, P33-8B	41A SYS_WR_L
P6-5G, P19-18B, P33-8B	42A SYS_WR_R
P6-5G, P19-18B, P33-8B	43A SYS_RD_L
P6-5G, P19-18B, P33-8B	44A SYS_RD_R
P6-5G, P19-18B, P33-8B	45A +5V_3
P6-5G, P19-18B, P33-8B	46A -5V_1
P6-5G, P19-18B, P33-8B	47A GND

P001 VJS3814	
GND	1B GND
+12V	2B +12V
-12V	3B -12V
+7.5V	4B +7.5V
-7.5V	5B -7.5V
GND	6B GND
RTV_SPD_L	7B RTV_SPD_L
REF_CHK	8B REF_CHK
PB_R24_ATF	9B PB_R24_ATF
DV_L_ATF	10B DV_L_ATF
FLUSH	11B FLUSH
FP_S1	12B FP_S1
P6-4B, P4-2C	13B NC(4FP_S1)
CK_45	14B CK_45
SPA_PB_L13	15B SPA_PB_L13
TRP1	16B TRP1
PB_L24_ENV	17B PB_L24_ENV
PB_R13_ENV	18B PB_R13_ENV
PB_R13_HSW	19B PB_R13_HSW
DV_L_HSW	20B DV_L_HSW
P6-5G, P19-18B, P33-8B	21B RXD_SV
P6-5G, P19-18B, P33-8B	22B SYS_AB0
P6-5G, P19-18B, P33-8B	23B SYS_AB1
P6-5G, P19-18B, P33-8B	24B SYS_AB2
P6-5G, P19-18B, P33-8B	25B SYS_AB3
P6-5G, P19-18B, P33-8B	26B SYS_AB4
P6-5G, P19-18B, P33-8B	27B SYS_AB5
P6-5G, P19-18B, P33-8B	28B SYS_AB6
P6-5G, P19-18B, P33-8B	29B SYS_AB7
P6-5G, P19-18B, P33-8B	30B SYS_AB8
P6-5G, P19-18B, P33-8B	31B SYS_AB9
P6-5G, P19-18B, P33-8B	32B SYS_AB10
P6-5G, P19-18B, P33-8B	33B SYS_DB1
P6-5G, P19-18B, P33-8B	34B SYS_DB2
P6-5G, P19-18B, P33-8B	35B SYS_DB3
P6-5G, P19-18B, P33-8B	36B SYS_DB4
P6-5G, P19-18B, P33-8B	37B SYS_DB5
P6-5G, P19-18B, P33-8B	38B SYS_DB6
P6-5G, P19-18B, P33-8B	39B SYS_DB7
P6-5G, P19-18B, P33-8B	40B SYS_DB8
P6-5G, P19-18B, P33-8B	41B SYS_DB9
P6-5G, P19-18B, P33-8B	42B SYS_DB10
P6-5G, P19-18B, P33-8B	43B SYS_WR_L
P6-5G, P19-18B, P33-8B	44B SYS_WR_R
P6-5G, P19-18B, P33-8B	45B SYS_RD_L
P6-5G, P19-18B, P33-8B	46B SYS_RD_R
P6-5G, P19-18B, P33-8B	47B +5V_3
P6-5G, P19-18B, P33-8B	48B -5V_1
P6-5G, P19-18B, P33-8B	49B GND

P001 VJS3814	
GND	1C GND
+12V	2C +12V
-12V	3C -12V
+7.5V	4C +7.5V
-7.5V	5C -7.5V
GND	6C GND
RTV_SPD_R	7C RTV_SPD_R
PB_L24_ATF	8C PB_L24_ATF
PB_R13_ATF	9C PB_R13_ATF
DV_L_ENV	10C DV_L_ENV
FEND	11C FEND
SPA_PB_L24	12C SPA_PB_L24
LIN_H	13C LIN_H
CUE_REV_H	14C CUE_REV_H
TRP2	15C TRP2
PB_R24_ENV	16C PB_R24_ENV
PB_L13_HSW	17C PB_L13_HSW
PB_R24_HSW	18C PB_R24_HSW
DV_R_HSW	19C DV_R_HSW
SERVO_EQ0	20C SERVO_EQ0
SYS_AB1	21C SYS_AB1
SYS_AB2	22C SYS_AB2
SYS_AB3	23C SYS_AB3
SYS_AB4	24C SYS_AB4
SYS_AB5	25C SYS_AB5
SYS_AB6	26C SYS_AB6
SYS_AB7	27C SYS_AB7
SYS_AB8	28C SYS_AB8
SYS_AB9	29C SYS_AB9
SYS_AB10	30C SYS_AB10
SYS_DB1	31C SYS_DB1
SYS_DB2	32C SYS_DB2
SYS_DB3	33C SYS_DB3
SYS_DB4	34C SYS_DB4
SYS_DB5	35C SYS_DB5
SYS_DB6	36C SYS_DB6
SYS_DB7	37C SYS_DB7
SYS_DB8	38C SYS_DB8
SYS_DB9	39C SYS_DB9
SYS_DB10	40C SYS_DB10
SYS_WR_L	41C SYS_WR_L
SYS_WR_R	42C SYS_WR_R
SYS_RD_L	43C SYS_RD_L
SYS_RD_R	44C SYS_RD_R
+5V_3	45C +5V_3
-5V_1	46C -5V_1
GND	47C GND

P002 VJS3814	
GND	1A GND
EQ_SLOW_H	2A EQ_SLOW_H
SV_CYL_PG	3A SV_CYL_PG
	4A NC(PB_R_HSW_25)
CYLH2	5A CYLH2
CYLH3	6A CYLH3
TENSION	7A TENSION
CYLH_V	8A CYLH_V
CTL_PRE	9A CTL_PRE
TRH1	10A TRH1
TRH2	11A TRH2
SRH_V	12A SRH_V
SRH1	13A SRH1
SRH3	14A SRH3
CAH_V	15A CAH_V
CAH2	16A CAH2
CAH3	17A CAH3
CAP_FG1_M	18A CAP_FG1_M
CYL_FG	19A CYL_FG
T_FG1_M	20A T_FG1_M
S_FG_GND	21A S_FG_GND
	22A
	23A
	24A NC(RP_L_HSW2)
CAP_FG1_PULSE	25A CAP_FG1_PULSE
SERVO_LOCK_L	26A SERVO_LOCK_L
	27A NOT CONNECT
WFM_CTL	28A WFM_CTL
	29A NOT CONNECT
	30A NOT CONNECT
+16V	31A +16V
GND_M	32A GND_M

F2

SYSCON

SYSCON

P003 VJS3814	
GND	1A GND
+12V	2A +12V
-12V	3A -12V
+7.5V	4A +7.5V
-7.5V	5A -7.5V
TC_OUT_C	6A (TC_IN_H)
RECEIVE_A_IO	7A TC_OUT_C
TRANSMIT_B_IO	8A RECEIVE_A_IO
TRANSMIT_A_OUT	9A TRANSMIT_B_IO
FEND_SYS	10A TRANSMIT_A_OUT
C_GAIN	11A FEND_SYS
SYS_SC_PHASE	12A C_GAIN
RET_GND	13A SYS_SC_PHASE
SERIAL_CLK	14A RET_GND
DSR	15A SERIAL_CLK
TXD	16A DSR
RF_CLK	17A TXD
	18A RF_CLK
	19A (RF_HALD_R_H)
	20A (DEC_DATA)
	21A DV_EQLD_H
	22A AV_CS_APROC_L
	23A AV_CS_APROC_L
	24A AV_ADRS9
	25A AV_ADRS6
	26A AV_ADRS3
	27A AV_ADRS0
	28A AV_RST_L
	29A AV_DATA5
	30A AV_DATA2
	31A +5V_3
	32A -5V_1
	32A GND

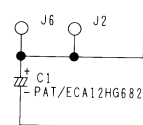
P003 VJS3814	
GND	1B GND
+12V	2B +12V
-12V	3B -12V
+7.5V	4B +7.5V
-7.5V	5B -7.5V
FAN_PULSE1	6B (TC_IN_C)
RECEIVE_B_IO	7B FAN_PULSE1
RECEIVE_A_OUT	8B RECEIVE_B_IO
TRANSMIT_B_OUT	9B RECEIVE_A_OUT
VIDEO_GAIN	10B TRANSMIT_B_OUT
HUE	11B VIDEO_GAIN
SYS_SC_CORSE_1	12B HUE
P_SERIAL_IN	13B SYS_SC_CORSE_1
STB_CLK16	14B P_SERIAL_IN
DTR	15B STB_CLK16
CTS	16B DTR
RF_DATA	17B CTS
AV_CS_NTRK_L	18B RF_DATA
WFM_TC	19B AV_CS_NTRK_L
AV_CS_VIDEO_L	20B WFM_TC
AV_CS_AUDIO_L	21B AV_CS_VIDEO_L
AV_ADRS8	22B AV_CS_AUDIO_L
AV_ADRS5	23B AV_ADRS8
AV_ADRS2	24B AV_ADRS5
AV_IORD_L	25B AV_ADRS2
AV_DATA7	26B AV_IORD_L
AV_DATA4	27B AV_DATA7
AV_DATA1	28B AV_DATA4
	29B AV_DATA1
	30B +5V_3
	31B -5V_1
	32B GND

P003 VJS3814	
GND	1C GND
+12V	2C +12V
-12V	3C -12V
+7.5V	4C +7.5V
-7.5V	5C -7.5V
TC_OUT_H	6C TC_OUT_H
FAN_PULSE2	7C FAN_PULSE2
TRANSMIT_A_IO	8C TRANSMIT_A_IO
RECEIVE_B_OUT	9C RECEIVE_B_OUT
PB_L_EQLD_H	10C PB_L_EQLD_H
SET_UP	11C SET_UP
SYS_H_PHASE	12C SYS_H_PHASE
SYS_SC_CORSE_2	13C SYS_SC_CORSE_2
P_SERIAL_OUT	14C P_SERIAL_OUT
DCD	15C DCD
RXD	16C RXD
RTS	17C RTS
PB_R_EQLD_H	18C PB_R_EQLD_H
	19C (RESERVE_1)
	20C LTC_CLK
	21C AV_CS_RECPR_L
	22C AV_ADRS10
	23C AV_ADRS7
	24C AV_ADRS4
	25C AV_ADRS1
	26C AV_IOWR_L
	27C AV_DATA6
	28C AV_DATA3
	29C AV_DATA0
	30C +5V_3
	31C -5V_1
	32C GND

P004 VJS3814	
GND	1A GND
REC_FRP_5V	2A REC_FRP_5V
SYS_AB0	3A SYS_AB0
SYS_AB3	4A SYS_AB3
SYS_AB6	5A SYS_AB6
SYS_AB9	6A SYS_AB9
SYS_DB1	7A SYS_DB1
SYS_DB4	8A SYS_DB4
SYS_DB7	9A SYS_DB7
SYS_WR_L	10A SYS_WR_L
SERVO_RESET_L	11A SERVO_RESET_L
TAPE_REV_H	12A TAPE_REV_H
M16_BUSY_L	13A M16_BUSY_L
I2DATA	14A I2DATA
CL_SER_CLK	15A CL_SER_CLK
OSD_CLK	16A OSD_CLK
SERVO_LOCK_L	17A SERVO_LOCK_L
CASSET_INL_H	18A CASSET_INL_H
CASSET2_H	19A CASSET2_H
CASSET_UP_L	20A CASSET_UP_L
MECHA_POS1_L	21A MECHA_POS1_L
MECHA_POS3_L	22A MECHA_POS3_L
CAST_DOWN_L	23A CAST_DOWN_L
REEL_POS1_H	24A REEL_POS1_H
TAPE_START_L	25A TAPE_START_L
TAPE_END_L	26A TAPE_END_L
R_STAND_L2S	27A R_STAND_L2S
R_STAND_S2L	28A R_STAND_S2L
U_FRONT_DATA	29A U_FRONT_DATA
	30A (A_IN_SEL_SW_L)
	31A +16V
	32A GND

P004 VJS3814	
GND	1B GND
FP_S1	2B FP_S1
SYS_AB1	3B SYS_AB1
SYS_AB4	4B SYS_AB4
SYS_AB7	5B SYS_AB7
SYS_AB10	6B SYS_AB10
SYS_DB2	7B SYS_DB2
SYS_DB5	8B SYS_DB5
SERVO_CS_L	9B SERVO_CS_L
SYS_BUSY_L	10B SYS_BUSY_L
SYS_SERVO_INT_L	11B SYS_SERVO_INT_L
FR_PULSE	12B FR_PULSE
M16_INT_L	13B M16_INT_L
CASSET_MID_H	14B CASSET_MID_H
CL_SER_TX	15B CL_SER_TX
OSD_DATA	16B OSD_DATA
COMP_SYNC_L	17B COMP_SYNC_L
CASSET1_H	18B CASSET1_H
CASSET_DOWN_H	19B CASSET_DOWN_H
MECHA_POS2_L	20B MECHA_POS2_L
SAFETY_TAB	21B SAFETY_TAB
REEL_POS2_H	22B REEL_POS2_H
TAPE_SENSOR_ON	23B TAPE_SENSOR_ON
F_LOAD_IN	24B F_LOAD_IN
LOADING	25B LOADING
UNLOADING	26B UNLOADING
FR_SER10A	27B FR_SER10A
FR_SER11A	28B FR_SER11A
	29B (V_IN_SEL_SW_L)
	30B +16V
	32B GND

P004 VJS3814	
GND	1C GND
FP_S1	2C FP_S1
SYS_AB2	3C SYS_AB2
SYS_AB5	4C SYS_AB5
SYS_AB8	5C SYS_AB8
SYS_DB3	6C SYS_DB3
SYS_DB6	7C SYS_DB6
SYS_RD_L	8C SYS_RD_L
SERVO_INT_L	9C SERVO_INT_L
	10C (REC_1)
	11C AV_CS_CSD1_L
	12C I2CLK
	13C OUT_FRM
	14C CL_SEL_RX
	15C OSD_STB
	16C CASSET_INR_H
	17C DEW_ON_H
	18C DEW_GND
	19C PINCH_ON
	20C PINCH_OFF
	21C S_BRAKE_ON
	22C S_BRAKE_OFF
	23C T_BRAKE_ON
	24C T_BRAKE_OFF
	25C M_STOPPER_OFF
	26C M_STOPPER_ON
	27C FR_SER10B
	28C FR_SER11B
	29C EJECT_SW_L
	30C +16V
	32C GND



COMPONENT NAME	MOTHER	04/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM226

F3

NON_TRK

NON_TRK

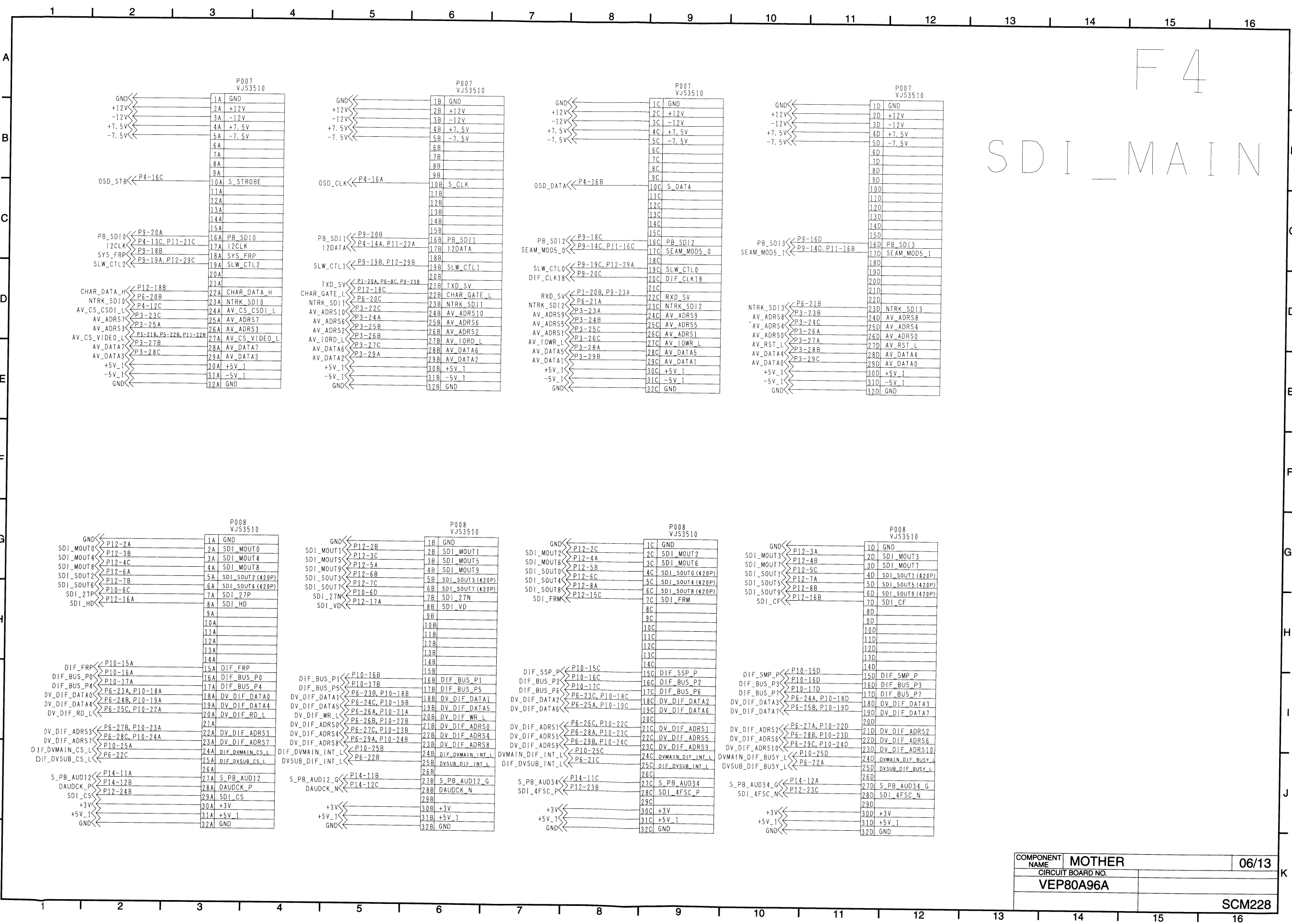
P005 VJS3814															
GND	1A	GND	GND	1B	GND	GND	1C	GND	GND	1A	GND	GND	1B	GND	GND
+12V	2A	+12V	+12V	2B	+12V	+12V	2C	+12V	CLK18_NTRK_P	2A	CLK18_NTRK_P	CLK18_NTRK_N	2B	CLK18_NTRK_N	2C
-12V	3A	-12V	-12V	3B	-12V	-12V	3C	-12V	TRP0	3A	TRP0	TRP1	3B	TRP1	3C
+7.5V	4A	+7.5V	+7.5V	4B	+7.5V	+7.5V	4C	+7.5V	FP_S0	4A	FP_S0	FP_S1	4B	FP_S1	4C
-7.5V	5A	-7.5V	-7.5V	5B	-7.5V	-7.5V	5C	-7.5V	P1-11A, P4-2B	5A	P1-11A, P4-2B	P1-11B, P4-2C	5B	P1-11B, P4-2C	5C
PB_DAT_L_P	P9-11C	6A	PB_DAT_L_P	P9-11D	6B	PB_DAT_L_P	P9-12A	6C	PB_CLK_L_P	6A	PB_CLK_L_P	PB_CLK_L_N	6B	PB_CLK_L_N	6C
PB_CLK_L_N	P9-12B	7A	PB_CLK_L_N	P9-12C	7B	PB_CLK_L_N	P9-12D	7C	PB_DAT_R_P	7A	PB_DAT_R_P	PB_DAT_R_N	7B	PB_DAT_R_N	7C
PB_CLK_R_P	P9-13A	8A	PB_CLK_R_P	P9-13B	8B	PB_CLK_R_P	P9-13C	8C	DV_L_ENV	8A	PB_CLK_R_P	PB_CLK_R_N	8B	PB_CLK_R_N	8C
DV_R_ENV	P18-20B, P1-10A	9A	DV_R_ENV	P20-20A, P1-17B	9B	PB_R13_ENV	P20-20B, P1-16C	9C	PB_R24_ENV	9A	PB_R24_ENV	PB_R24_N	9B	PB_R24_N	9C
DV_DAT_L_P	P18-11C	10A	DV_DAT_L_P	P18-12A	10B	DV_DAT_L_N	P18-12B	10C	DV_CLK_L_P	10A	DV_CLK_L_P	PB_DAT_R13_P	10B	PB_DAT_R13_P	10C
DV_CLK_L_N	P18-12C	11A	DV_CLK_L_N	P18-13A	11B	DV_DAT_R_P	P18-13B	11C	DV_DAT_R_N	11A	DV_DAT_R_N	PB_CLK_R13_P	11B	PB_CLK_R13_P	11C
DV_CLK_R_P	P18-13C	12A	DV_CLK_R_P	P18-14A	12B	DV_CLK_R_N	P18-14B	12C	PB_DAT_R13_P	12A	PB_DAT_R13_P	PB_CLK_R13_N	12B	PB_CLK_R13_N	12C
PB_DAT_R13_N	P20-12A	13A	PB_DAT_R13_N	P20-12B	13B	PB_CLK_R13_P	P20-12C	13C	PB_CLK_R13_N	13A	PB_CLK_R13_N	PB_DAT_R24_P	13B	PB_DAT_R24_P	13C
PB_DAT_R24_P	P20-13A	14A	PB_DAT_R24_P	P20-13B	14B	PB_DAT_R24_N	P20-13C	14C	PB_CLK_R24_P	14A	PB_CLK_R24_P	PB_CLK_R24_N	14B	PB_CLK_R24_N	14C
PB_CLK_R24_N	P20-14A	15A	PB_CLK_R24_N	P20-14B	15B	PB_CLK_L13_P	P20-14C	15C	PB_DAT_L13_P	15A	PB_DAT_L13_P	PB_CLK_L13_N	15B	PB_CLK_L13_N	15C
PB_CLK_L13_P	P19-12B	16A	PB_CLK_L13_P	P19-12C	16B	PB_CLK_L13_N	P19-12D	16C	PB_DAT_L13_N	16A	PB_DAT_L13_N	PB_CLK_L24_P	16B	PB_CLK_L24_P	16C
PB_DAT_L24_N	P19-13B	17A	PB_DAT_L24_N	P19-13C	17B	PB_CLK_L24_P	P19-13D	17C	PB_CLK_L24_N	17A	PB_CLK_L24_N	PB_CLK_L24_N	17B	PB_CLK_L24_N	17C
VS_CS_DV_L	P18-21A	18A	VS_CS_DV_L	P18-21A	18B	VS_CS_DV_R	P18-21A	18C	VS_CS_PB_R13	18A	VS_CS_PB_R13	PB_CLK_L24_P	18B	PB_CLK_L24_P	18C
VS_CS_PB_R24	P20-22A	19A	VS_CS_PB_R24	P20-22A	19B	VS_CS_PB_L13	P20-22A	19C	VS_CS_PB_L24	19A	VS_CS_PB_L24	PB_CLK_L24_N	19B	PB_CLK_L24_N	19C
VS_CLK	P18-21B, P13-21B, P10-21B	20A	VS_CLK	P18-21C, P13-21C, P10-21C	20B	VS_CLK135	P18-21D, P13-21D, P10-21D	20C	VS_CLK135	20A	VS_CLK135	PB_L24_ENV	20B	PB_L24_ENV	20C
PB_L24_ENV	P19-20B, P1-16B	21A	PB_L24_ENV	P19-20B, P1-16B	21B	VS_CLK135	P19-20B, P1-16B	21C	VS_CLK135	21A	VS_CLK135	AV_INT_L	21B	AV_INT_L	21C
AV_INT_L	P9-19D	22A	AV_INT_L	P9-19D	22B	AV_CS_VIDEO_L	P3-21B, P7-21A, P11-21B	22C	AV_CS_VIDEO_L	22A	AV_CS_VIDEO_L	AV_INT_L	22B	AV_INT_L	22C
AV_ADR59	P3-23A	23A	AV_ADR59	P3-23A	23B	AV_ADR58	P3-23B	23C	AV_ADR58	23A	AV_ADR58	AV_ADR59	23B	AV_ADR59	23C
AV_ADR58	P3-24A	24A	AV_ADR58	P3-24A	24B	AV_ADR55	P3-24B	24C	AV_ADR55	24A	AV_ADR55	AV_ADR58	24B	AV_ADR58	24C
AV_ADR57	P3-25A	25A	AV_ADR57	P3-25A	25B	AV_ADR52	P3-25B	25C	AV_ADR52	25A	AV_ADR52	AV_ADR57	25B	AV_ADR57	25C
AV_ADR56	P3-26A	26A	AV_ADR56	P3-26A	26B	AV_IORD_L	P3-26B	26C	AV_IORD_L	26A	AV_IORD_L	AV_ADR56	26B	AV_ADR56	26C
AV_RST_L	P3-27A	27A	AV_RST_L	P3-27A	27B	AV_DATA7	P3-27B	27C	AV_DATA7	27A	AV_DATA7	AV_ADR55	27B	AV_ADR55	27C
AV_DATA5	P3-28A	28A	AV_DATA5	P3-28A	28B	AV_DATA4	P3-28B	28C	AV_DATA4	28A	AV_DATA4	AV_ADR54	28B	AV_ADR54	28C
AV_DATA2	P3-29A	29A	AV_DATA2	P3-29A	29B	AV_DATA1	P3-29B	29C	AV_DATA1	29A	AV_DATA1	AV_ADR53	29B	AV_ADR53	29C
+5V_I	30A	+5V_I	+5V_I	30A	+5V_I	+5V_I	30A	+5V_I	+5V_I	30A	+5V_I	AV_ADR52	30B	AV_ADR52	30C
-5V_I	31A	-5V_I	-5V_I	31A	-5V_I	-5V_I	31A	-5V_I	-5V_I	31A	-5V_I	AV_ADR51	31B	AV_ADR51	31C
GND	32A	GND	GND	32A	GND	GND	32A	GND	GND	32A	GND	AV_ADR50	32B	AV_ADR50	32C

COMPONENT NAME	MOTHER	05/13
CIRCUIT BOARD NO.	VEP80A96A	
SCM227		

KROL93(5/13)

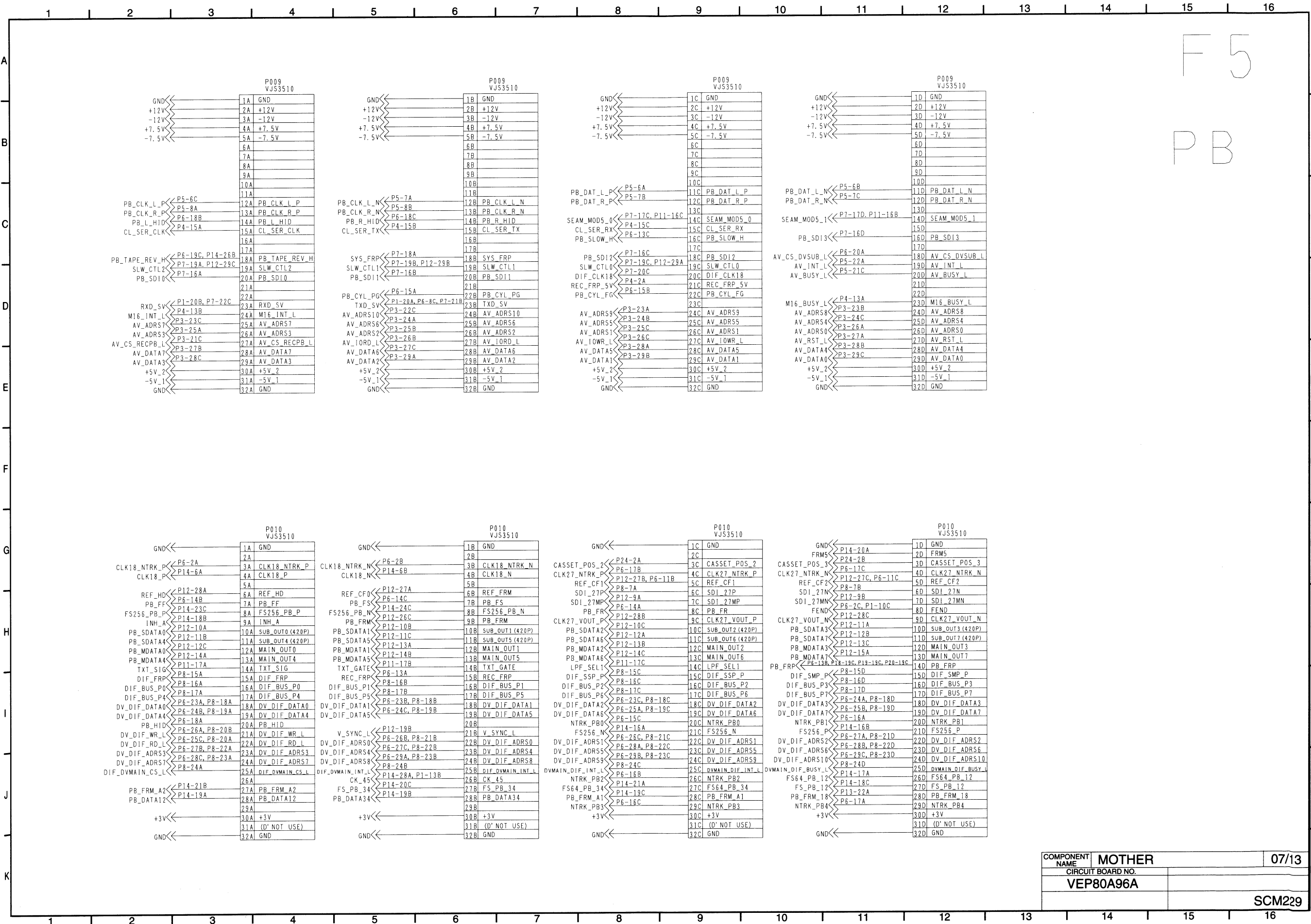
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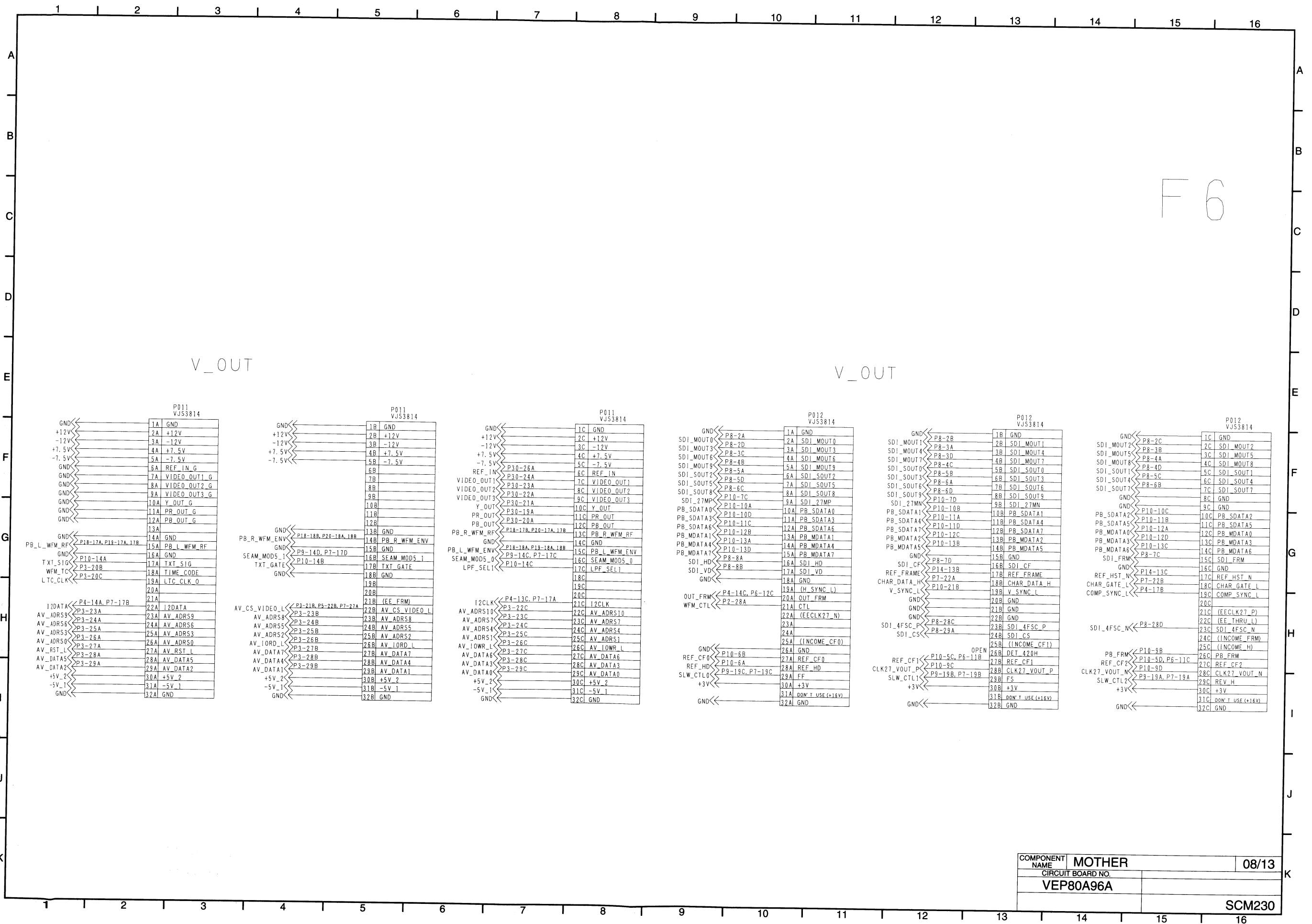
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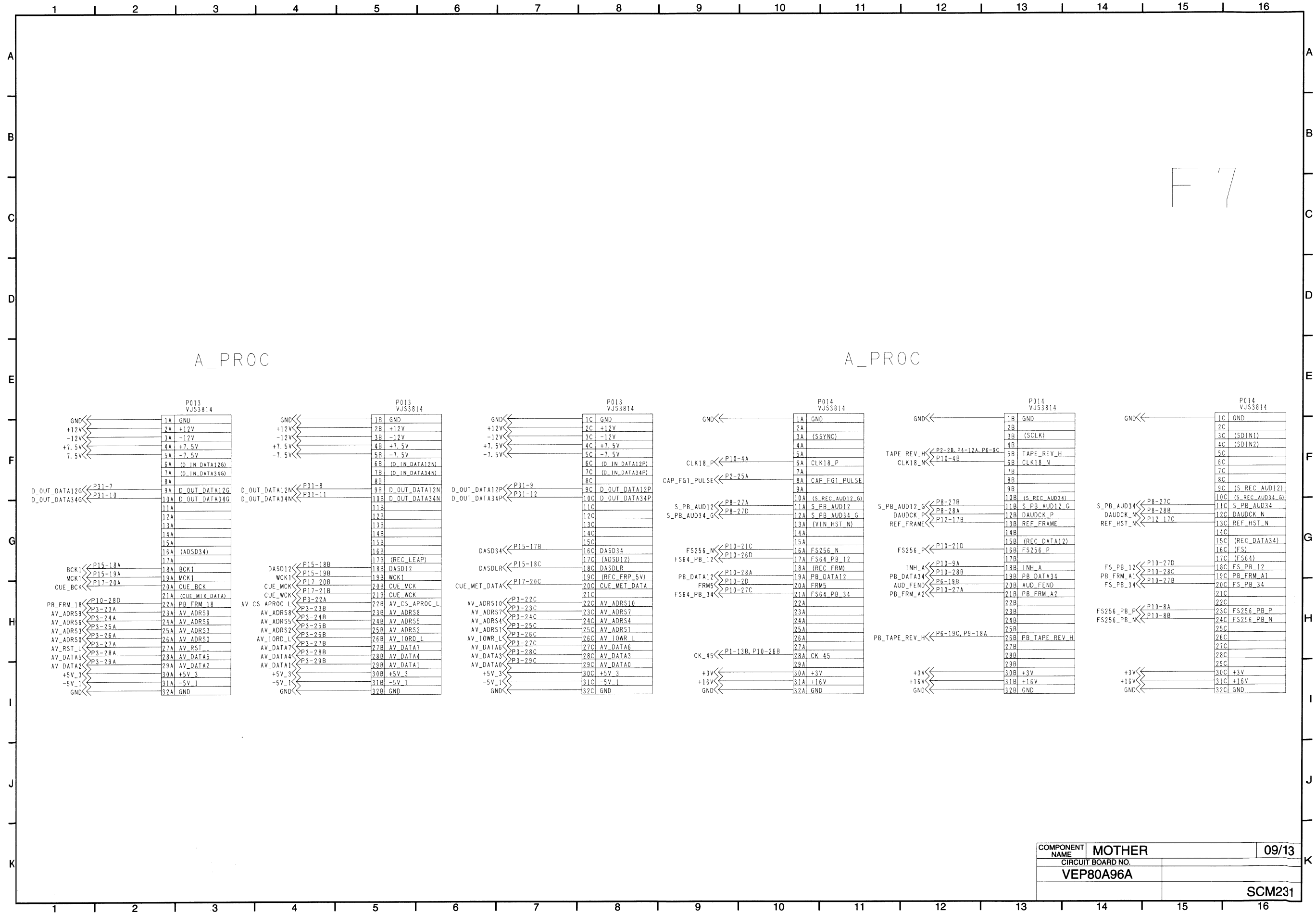
COMPONENT NAME	MOTHER	06/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM228

KROL93(6/13)





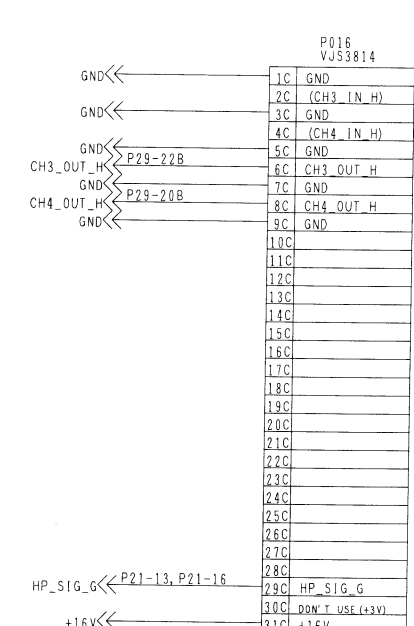
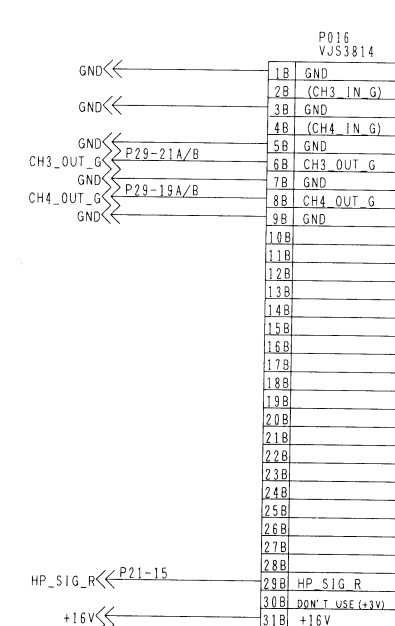
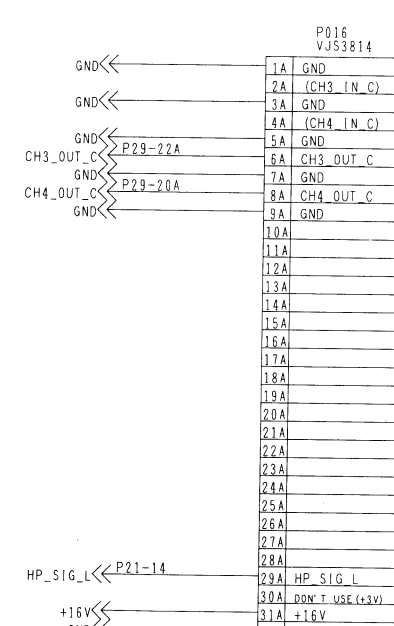
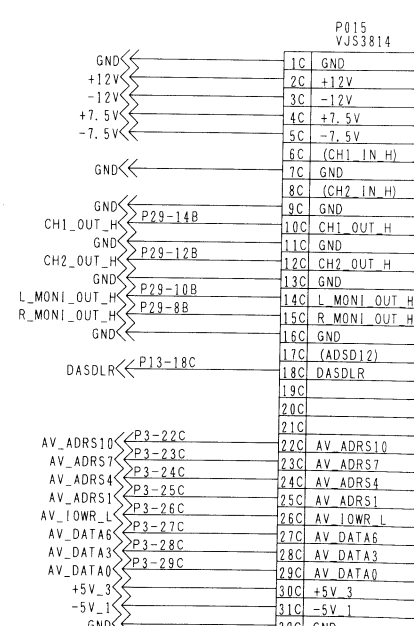
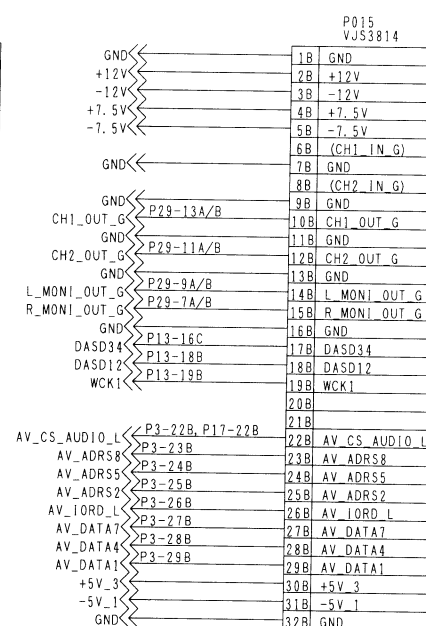
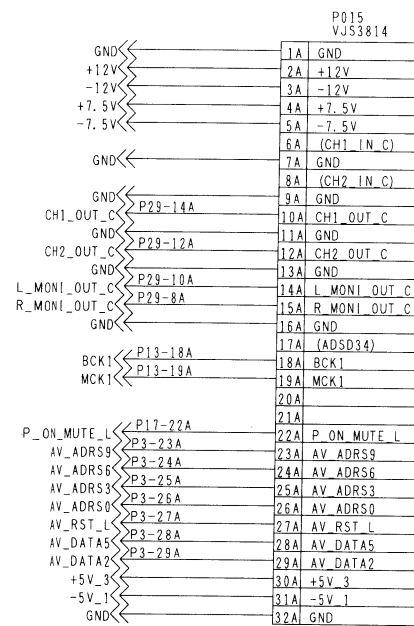
KROL93(9/13)



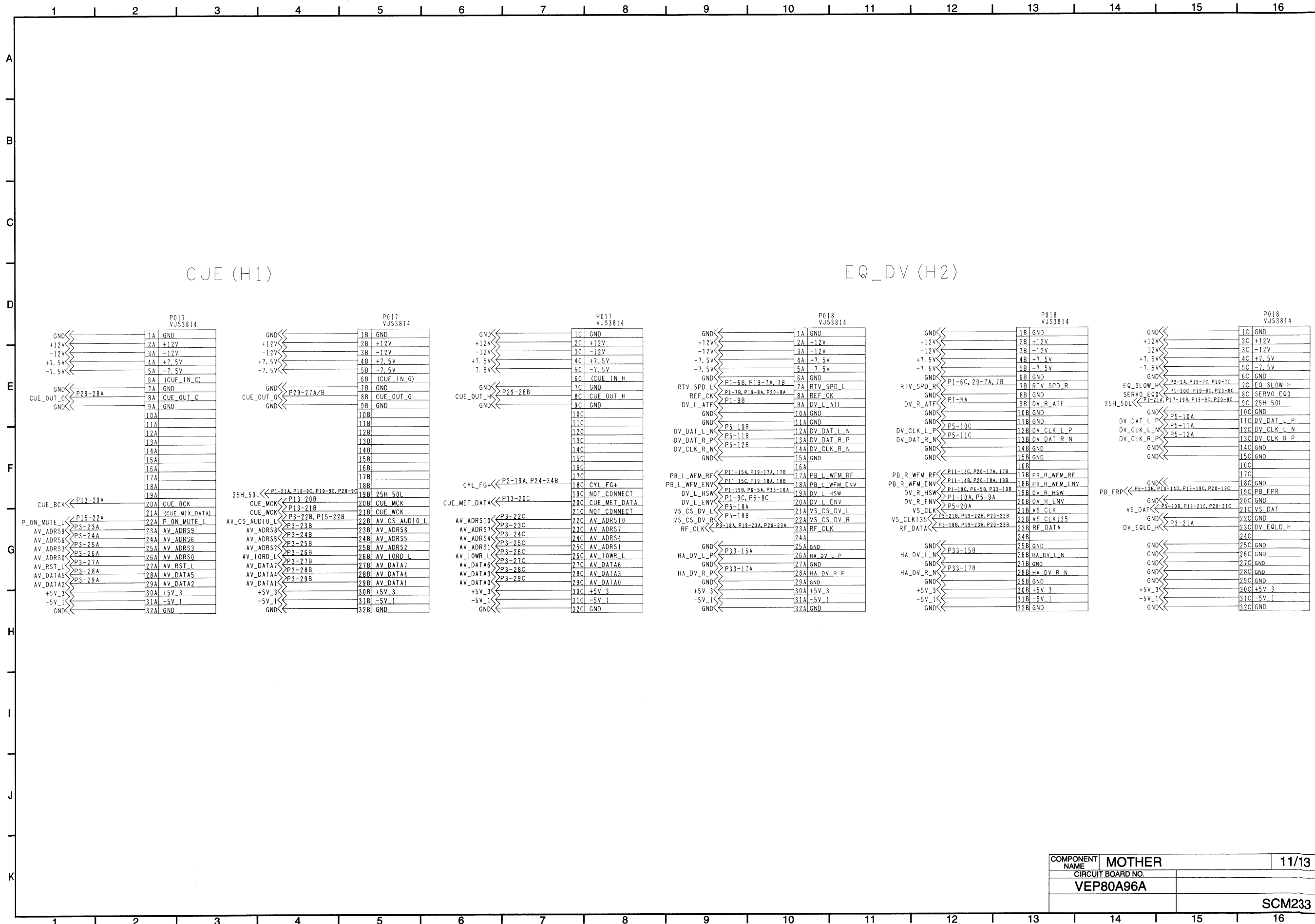
F8

A_ADDA

A_ADDA



COMPONENT NAME	MOTHER	10/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM232



KROL93(11/13)

COMPONENT NAME	MOTHER	11/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM233

EQ_PBL (H3)

P019 VJS3814	
GND	1A GND
+12V	2A +12V
-12V	3A -12V
+7.5V	4A +7.5V
-7.5V	5A -7.5V
GND	6A GND
RTV_SPD_L	P1-6B, P18-7A, P18-7B 7A RTV SPD_L
REF CK	P1-7B, P18-8A, P20-8A 8A REF CK
PB_L13_ATF	P1-8A 9A PB_L13 ATF
GND	10A GND
GND	11A GND
PB_DAT_L13_N	P5-15C 12A PB_DAT_L13_N
PB_DAT_L24_P	P5-16C 13A PB_DAT_L24_P
PB_CLK_L24_N	P5-17C 14A PB_CLK_L24_N
GND	15A GND
GND	16A
PB_L_WFM_RF	P11-15A, P18-17A 17A PB_L_WFM_RF
PB_L_WFM_ENV	P11-15C, P18-18A 18A PB_L_WFM_ENV
PB_L13_HSW	P1-17C, P6-6B, P33-8A 19A PB_L13_HSW
PB_L13_ENV	P1-17A, P5-20C 20A PB_L13_ENV
VS_CS_PB_L13	P5-19B 21A VS_CS_PB_L13
VS_CS_PB_L24	P5-19C 22A VS_CS_PB_L24
RF_CLK	P3-18A, P18-23A, P20-23A 23A RF_CLK
GND	24A
HA_PB_L13_P	P33-19A 25A GND
GND	26A HA_PB_L13_P
HA_PB_L24_P	P33-21A 27A GND
GND	28A HA_PB_L24_P
GND	29A GND
+5V_3	30A +5V_3
-5V_1	31A -5V_1
GND	32A GND

P019 VJS3814	
GND	1B GND
+12V	2B +12V
-12V	3B -12V
+7.5V	4B +7.5V
-7.5V	5B -7.5V
GND	6B GND
RTV_SPD_L	P1-6B, P18-7A, P18-7A 7B RTV SPD_L
GND	P1-7C 8B GND
PB_L24_ATF	P1-7C 9B PB_L24 ATF
GND	10B GND
GND	11B GND
PB_CLK_L13_P	P5-16A 12B PB_CLK_L13_P
PB_DAT_L24_N	P5-17A 13B PB_DAT_L24_N
GND	14B GND
GND	15B GND
GND	16B
PB_L_WFM_RF	P11-15A, P18-17A 17B PB_L_WFM_RF
PB_L_WFM_ENV	P11-15C, P18-18A 18B PB_L_WFM_ENV
PB_L24_HSW	P1-18A, P5-5C, P33-9B 19B PB_L24_HSW
PB_L24_ENV	P1-16B, P5-21A 20B PB_L24_ENV
VS_CLK	P5-20A 21B VS_CLK
VS_CLK135	P5-21B, P18-22B, P20-22B 22B VS_CLK135
RF_DATA	P3-18B, P18-23B, P20-23B 23B RF_DATA
GND	24B
GND	25B GND
HA_PB_L13_N	P33-19B 26B HA_PB_L13_N
GND	27B GND
HA_PB_L24_N	P33-21B 28B HA_PB_L24_N
GND	29B GND
+5V_3	30B +5V_3
-5V_1	31B -5V_1
GND	32B GND

P019 VJS3814	
GND	1C GND
+12V	2C +12V
-12V	3C -12V
+7.5V	4C +7.5V
-7.5V	5C -7.5V
GND	6C GND
EQ_SLOW_H	P2-2A, P18-7C, P20-7C 7C EQ_SLOW_H
SERVO_EQ0	P1-20C, P18-8C, P20-8C 8C SERVO_EQ0
25H_50L	P1-21A, P17-19B, P18-9C, P20-9C 9C 25H_50L
GND	10C GND
PB_DAT_L13_P	P5-15B 11C PB_DAT_L13_P
PB_CLK_L13_N	P5-16B 12C PB_CLK_L13_N
PB_CLK_L24_P	P5-17B 13C PB_CLK_L24_P
GND	14C GND
GND	15C GND
GND	16C
GND	17C
PB_FRP	P5-13B, P18-14D, P18-19C, P20-19C 18C PB_FRP
GND	19C GND
VS_DAT	P5-20B, P18-21C, P20-21C 20C VS_DAT
GND	21C GND
PB_L_EQLD_H	P3-19C 22C PB_L_EQLD_H
GND	23C
GND	24C
GND	25C GND
GND	26C GND
GND	27C GND
GND	28C GND
GND	29C GND
+5V_3	30C +5V_3
-5V_1	31C -5V_1
GND	32C GND

EQ_PBR (H4)

P020 VJS3814	
GND	1A GND
+12V	2A +12V
-12V	3A -12V
+7.5V	4A +7.5V
-7.5V	5A -7.5V
GND	6A GND
RTV_SPD_R	P1-6C, P18-7B, P20-7B 7A RTV SPD_R
REF CK	P1-7B, P18-8A, P19-8A 8A REF CK
PB_R13_ATF	P1-8C 9A PB_R13 ATF
GND	10A GND
GND	11A GND
PB_DAT_R13_N	P5-13A 12A PB_DAT_R13_N
PB_DAT_R24_P	P5-14A 13A PB_DAT_R24_P
PB_CLK_R24_N	P5-15A 14A PB_CLK_R24_N
GND	15A GND
GND	16A
PB_R_WFM_RF	P11-13C, P18-17B 17A PB_R_WFM_RF
PB_R_WFM_ENV	P11-14B, P18-18B 18A PB_R_WFM_ENV
PB_R13_HSW	P1-18B, P6-6C, P33-8A 19A PB_R13_HSW
PB_R13_ENV	P1-17B, P5-9B 20A PB_R13_ENV
VS_CS_PB_R13	P5-18C 21A VS_CS_PB_R13
VS_CS_PB_R24	P5-19A 22A VS_CS_PB_R24
RF_CLK	P3-18A, P18-23A, P19-23A 23A RF_CLK
GND	24A
HA_PB_R13_P	P33-23A 25A GND
GND	26A HA_PB_R13_P
HA_PB_R24_P	P33-25A 27A GND
GND	28A HA_PB_R24_P
GND	29A GND
+5V_3	30A +5V_3
-5V_1	31A -5V_1
GND	32A GND

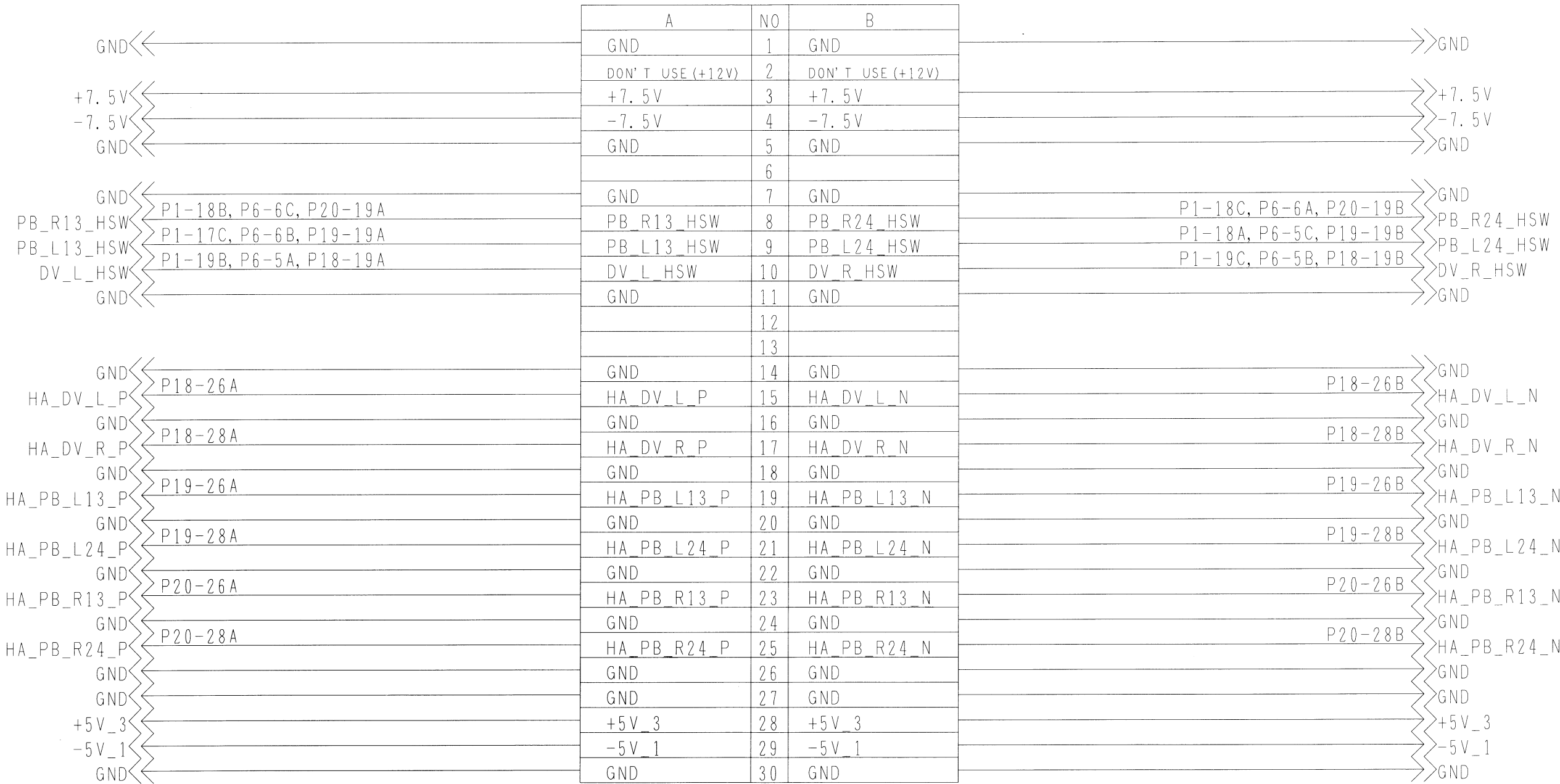
P020 VJS3814	
GND	1B GND
+12V	2B +12V
-12V	3B -12V
+7.5V	4B +7.5V
-7.5V	5B -7.5V
GND	6B GND
RTV_SPD_R	P1-6C, P18-7B, P20-7A 7B RTV SPD_R
GND	P1-8B 8B GND
PB_R24_ATF	P1-8B 9B PB_R24 ATF
GND	10B GND
GND	11B GND
PB_CLK_R13_P	P5-13B 12B PB_CLK_R13_P
PB_DAT_R24_N	P5-14B 13B PB_DAT_R24_N
GND	14B GND
GND	15B GND
GND	16B
PB_R_WFM_RF	P11-13C, P18-17B 17B PB_R_WFM_RF
PB_R_WFM_ENV	P11-14B, P18-18B 18B PB_R_WFM_ENV
PB_R24_HSW	P1-18C, P6-6A, P33-8B 19B PB_R24_HSW
PB_R24_ENV	P1-16C, P5-9C 20B PB_R24_ENV
VS_CLK	P5-20A 21B VS_CLK
VS_CLK135	P5-21B, P18-22B, P19-22B 22B VS_CLK135
RF_DATA	P3-18B, P18-23B, P19-23B 23B RF_DATA
GND	24B
GND	25B GND
HA_PB_R13_N	P33-23B 26B HA_PB_R13_N
GND	27B GND
HA_PB_R24_N	P33-25B 28B HA_PB_R24_N
GND	29B GND
+5V_3	30B +5V_3
-5V_1	31B -5V_1
GND	32B GND

P020 VJS3814	
GND	1C GND
+12V	2C +12V
-12V	3C -12V
+7.5V	4C +7.5V
-7.5V	5C -7.5V
GND	6C GND
EQ_SLOW_H	P2-2A, P18-7C, P19-7C 7C EQ_SLOW_H
SERVO_EQ0	P1-20C, P18-8C, P19-8C 8C SERVO_EQ0
25H_50L	P1-21A, P17-19B, P18-9C, P19-9C 9C 25H_50L
GND	10C GND
GND	11C GND
PB_DAT_R13_P	P5-12C 11C PB_DAT_R13_P
PB_CLK_R13_N	P5-13C 12C PB_CLK_R13_N
PB_CLK_R24_P	P5-14C 13C PB_CLK_R24_P
GND	14C GND
GND	15C GND
GND	16C
GND	17C
PB_FRP	P5-13B, P18-14D, P18-19C, P19-19C 18C PB_FRP
GND	19C GND
VS_DAT	P5-20B, P18-21C, P19-21C 20C VS_DAT
GND	21C GND
PB_R_EQLD_H	P3-19C 22C PB_R_EQLD_H
GND	23C
GND	24C
GND	25C GND
GND	26C GND
GND	27C GND
GND	28C GND
GND	29C GND
+5V_3	30C +5V_3
-5V_1	31C -5V_1
GND	32C GND

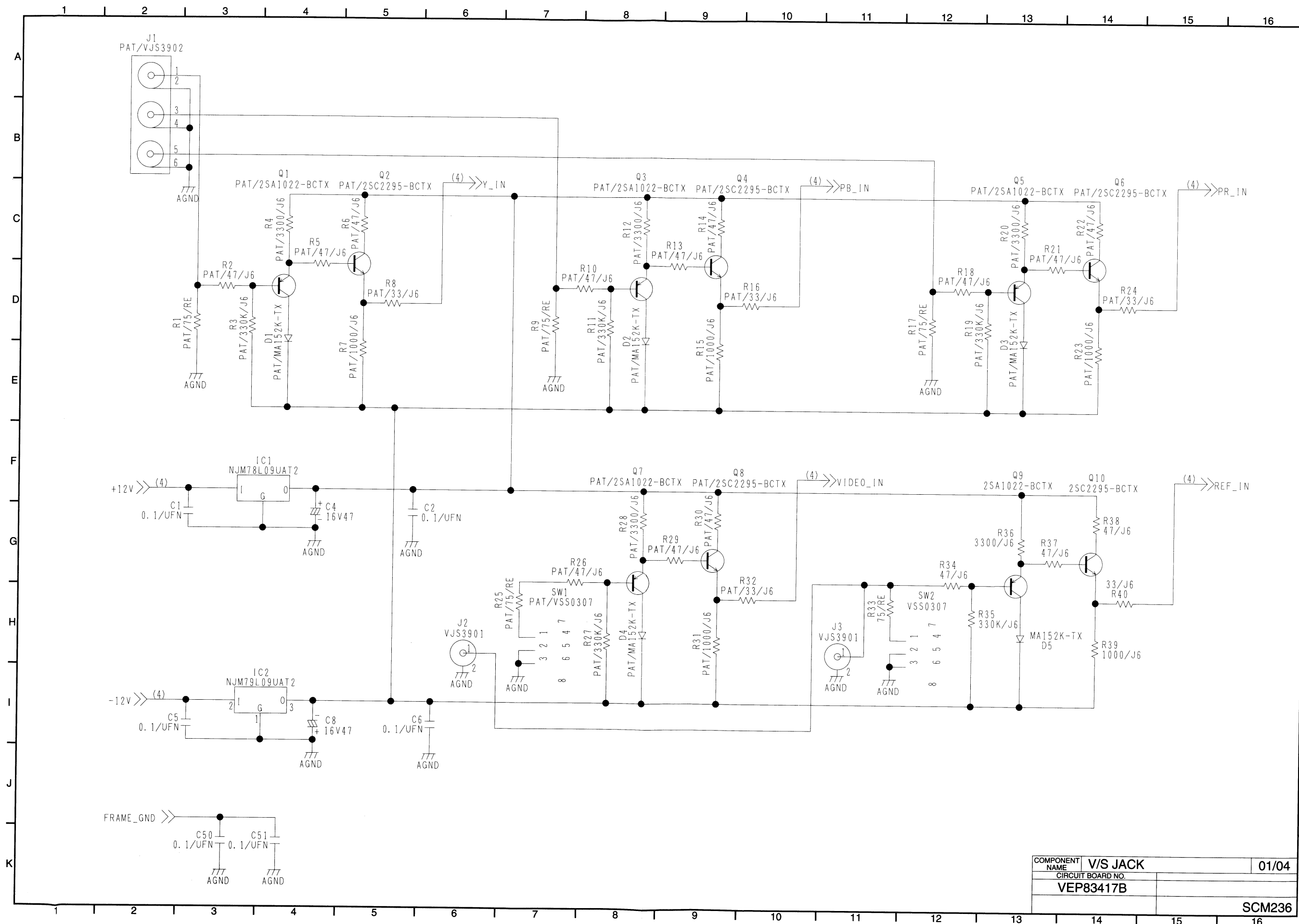
COMPONENT NAME	MOTHER	12/13
CIRCUIT BOARD NO.	VEP80A96A	
		SCM234

HEAD_AMP

P033 VJP3375A060



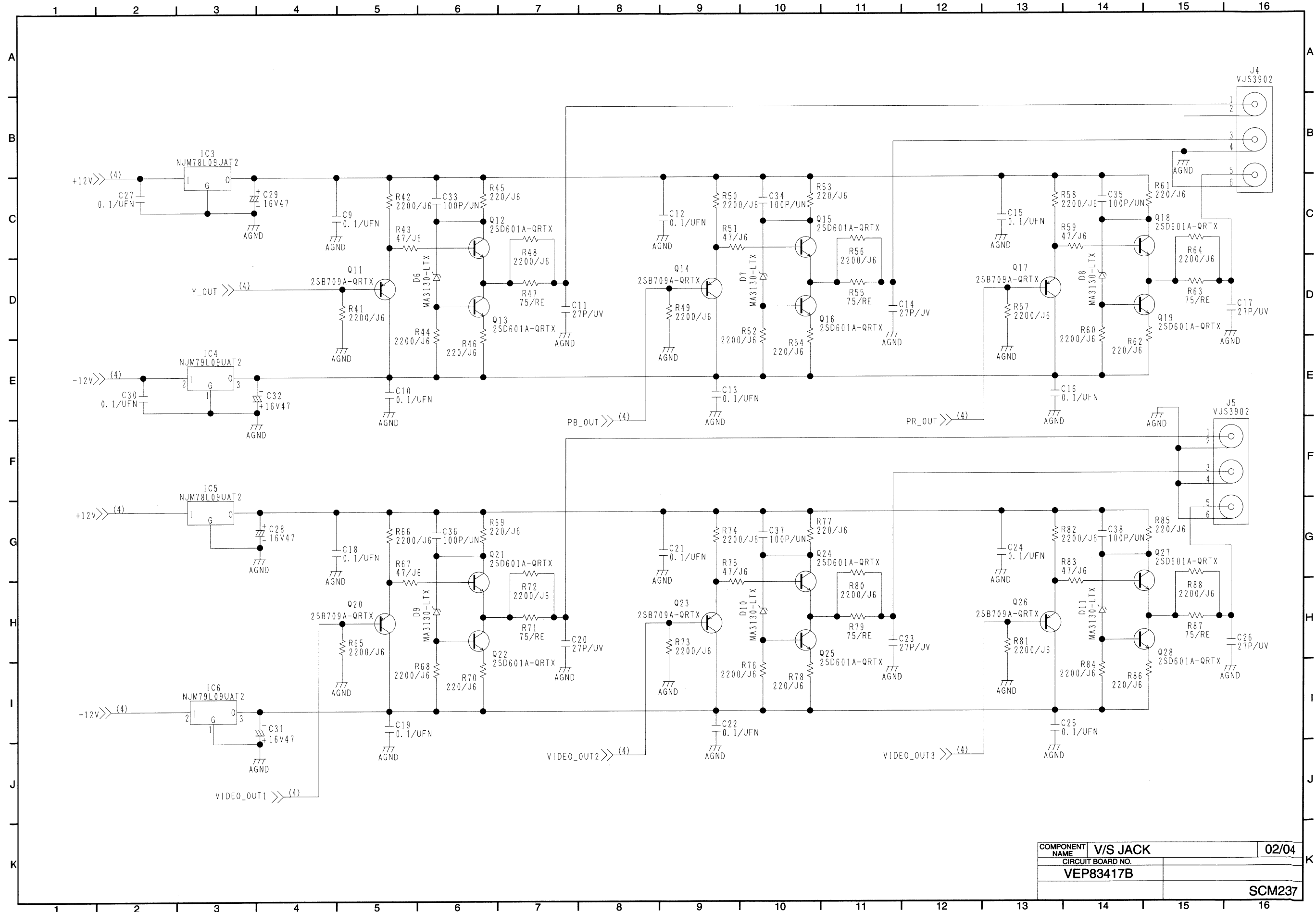
KROL93(13/13)

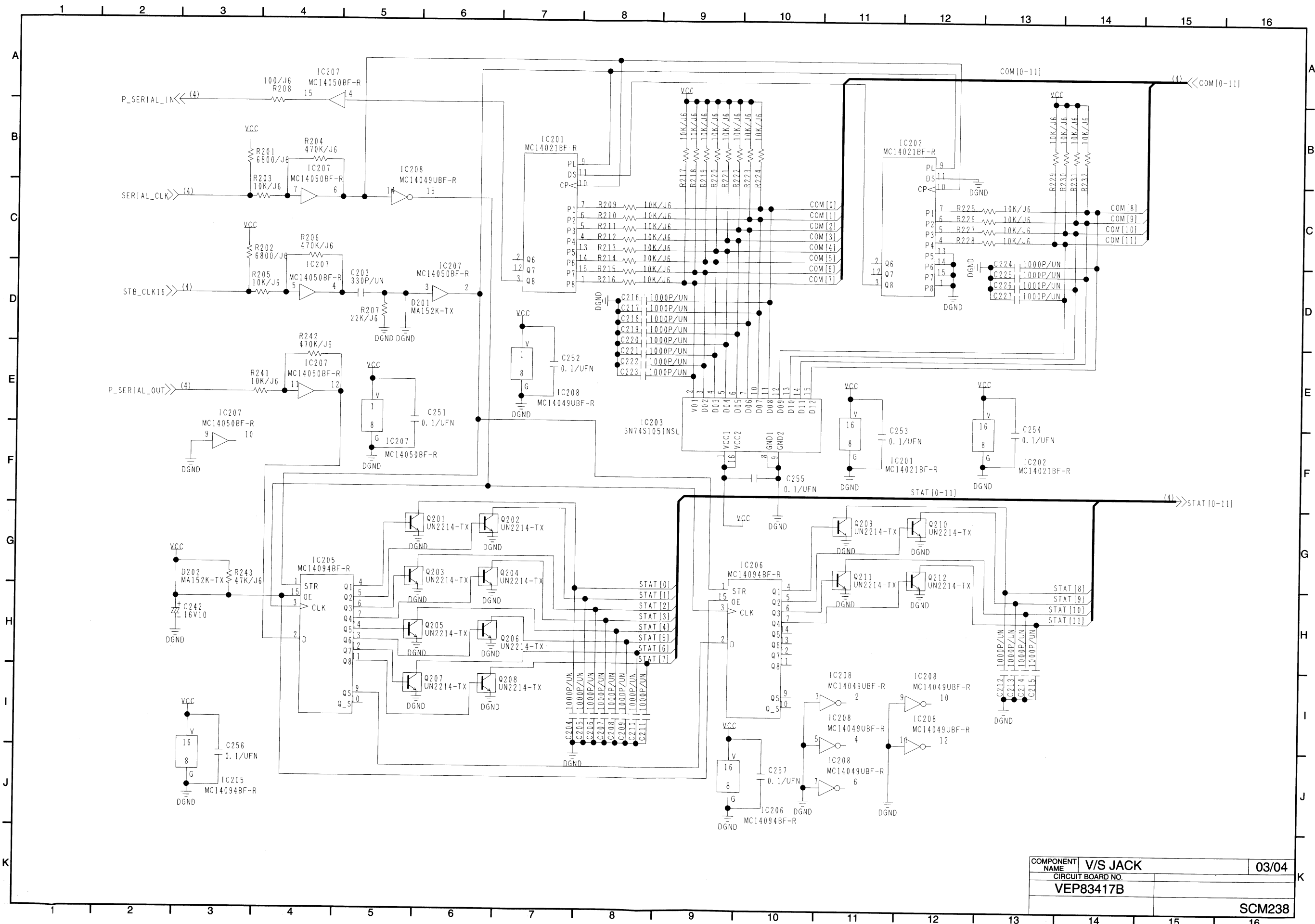


COMPONENT NAME	V/S JACK	01/04
CIRCUIT BOARD NO.	VEP83417B	
		SCM236

KR3X13(1/4)

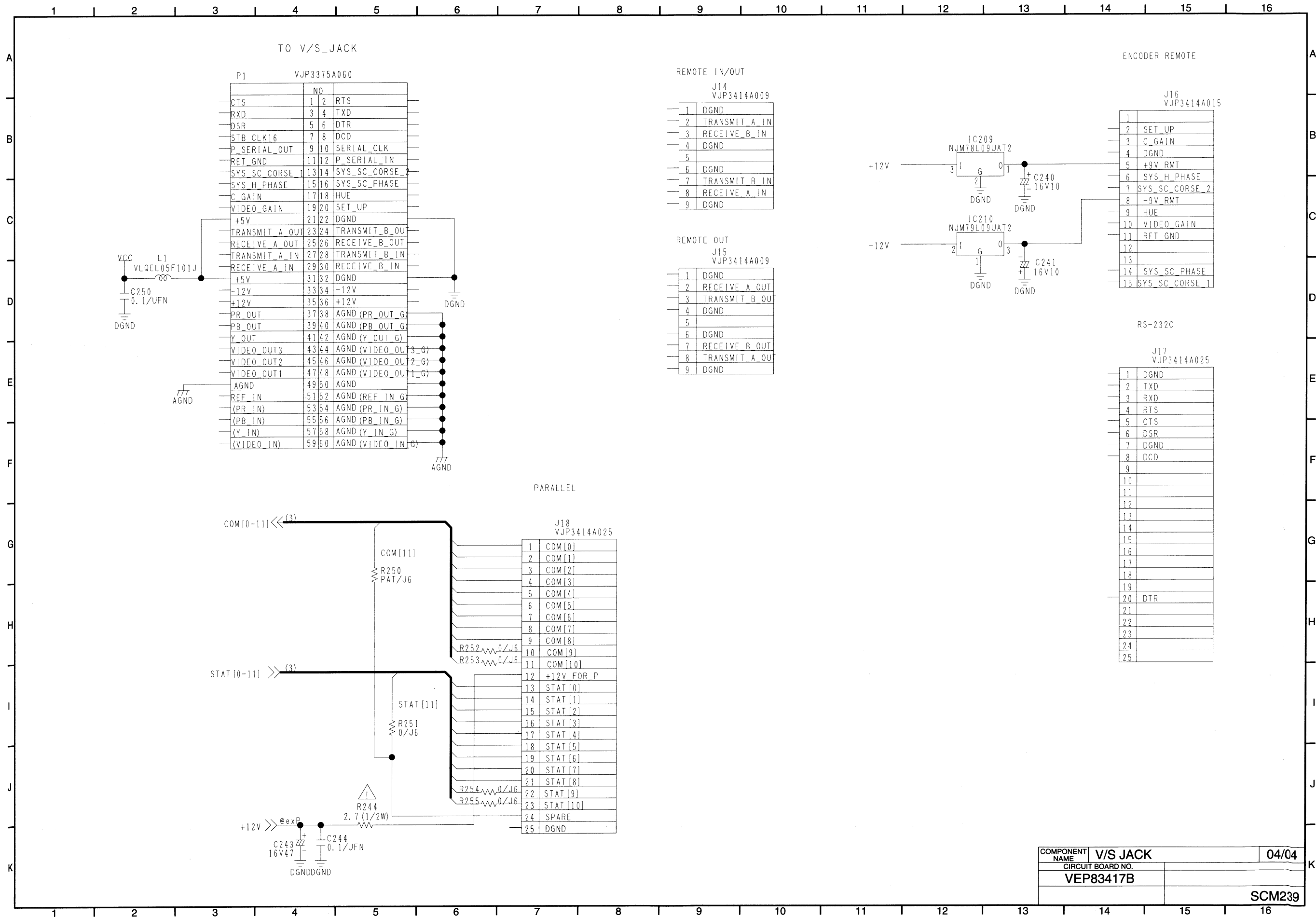
KR3X13(2/4)

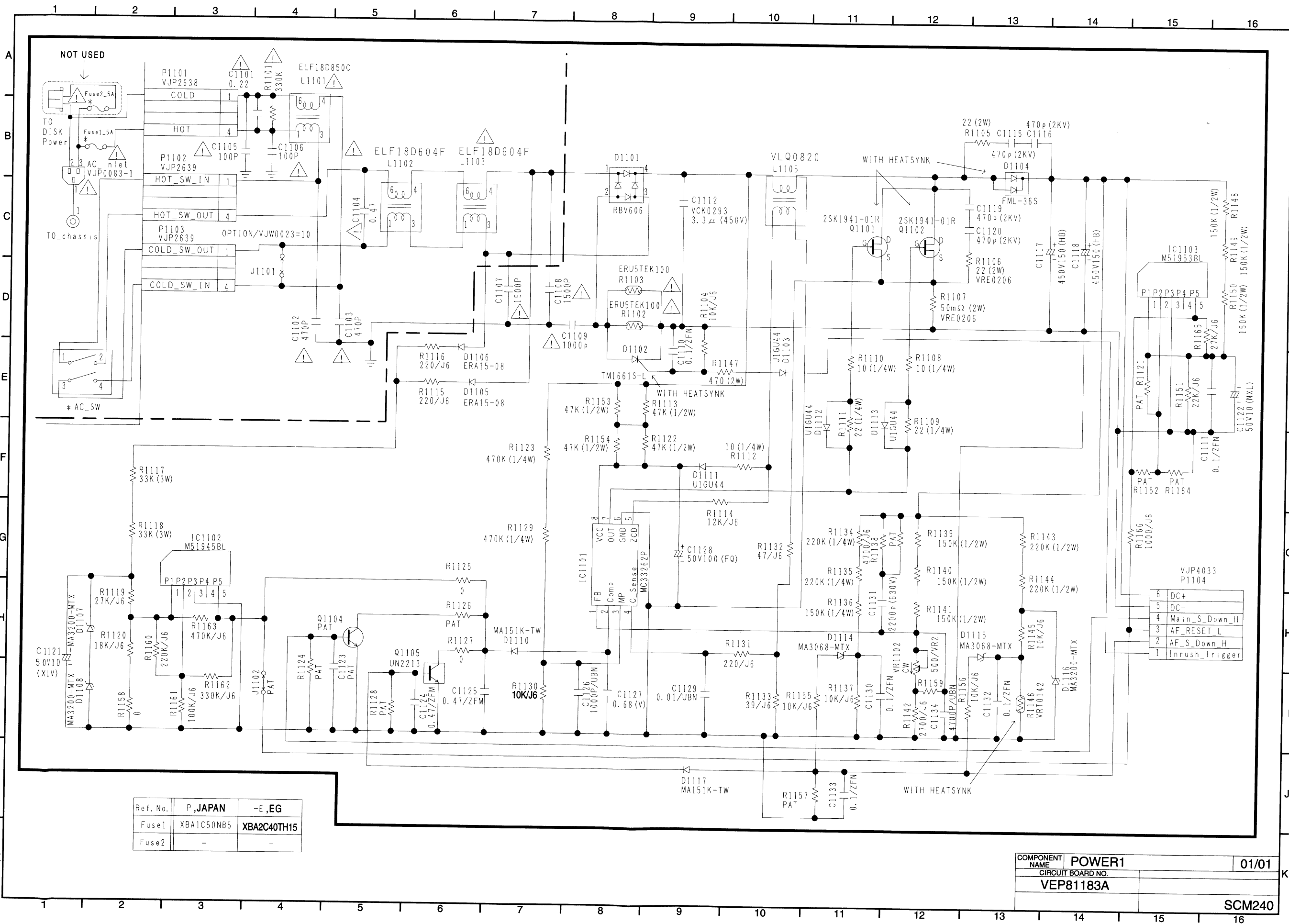




COMPONENT NAME	V/S JACK	03/04
CIRCUIT BOARD NO.	VEP83417B	
		SCM238

KR3X13(3/4)



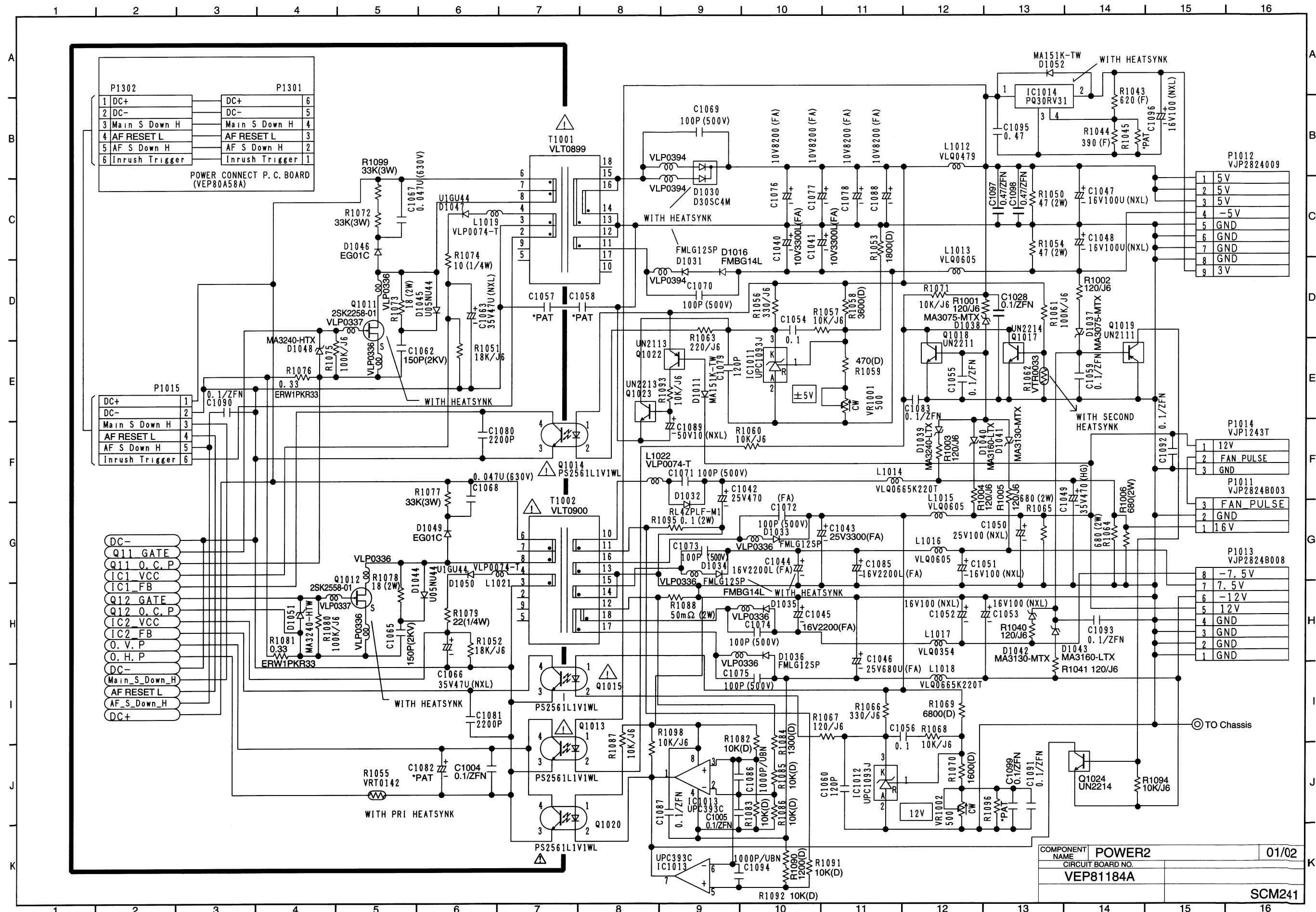


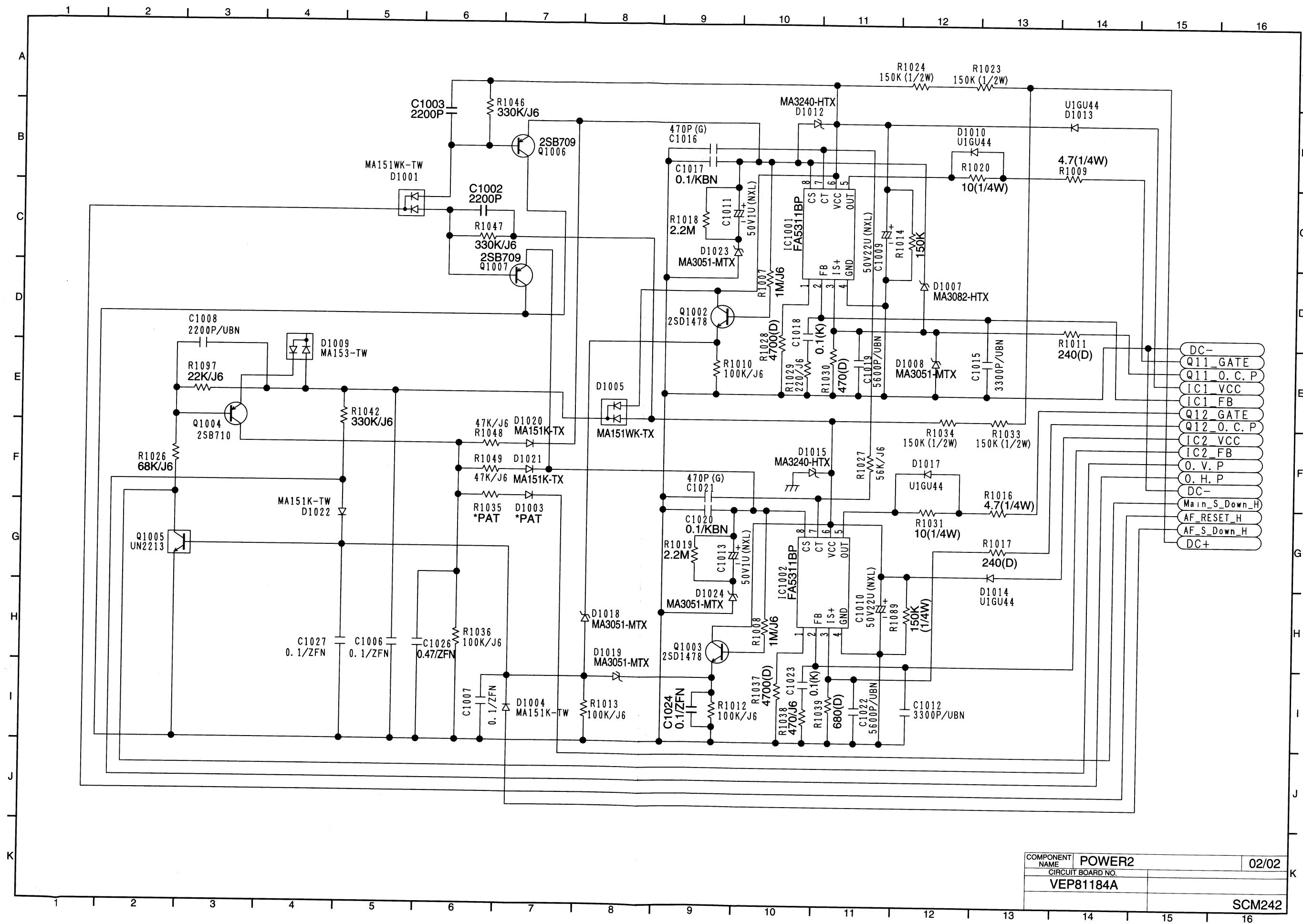
Ref. No.	P, JAPAN	-E, EG
Fuse1	XBA1C50NB5	XBA2C40TH15
Fuse2	-	-

COMPONENT NAME	POWER1	01/01
CIRCUIT BOARD NO.	VEP81183A	
SCM240		

KR1C79(1/1)-3

KR1C80(1/2)-3

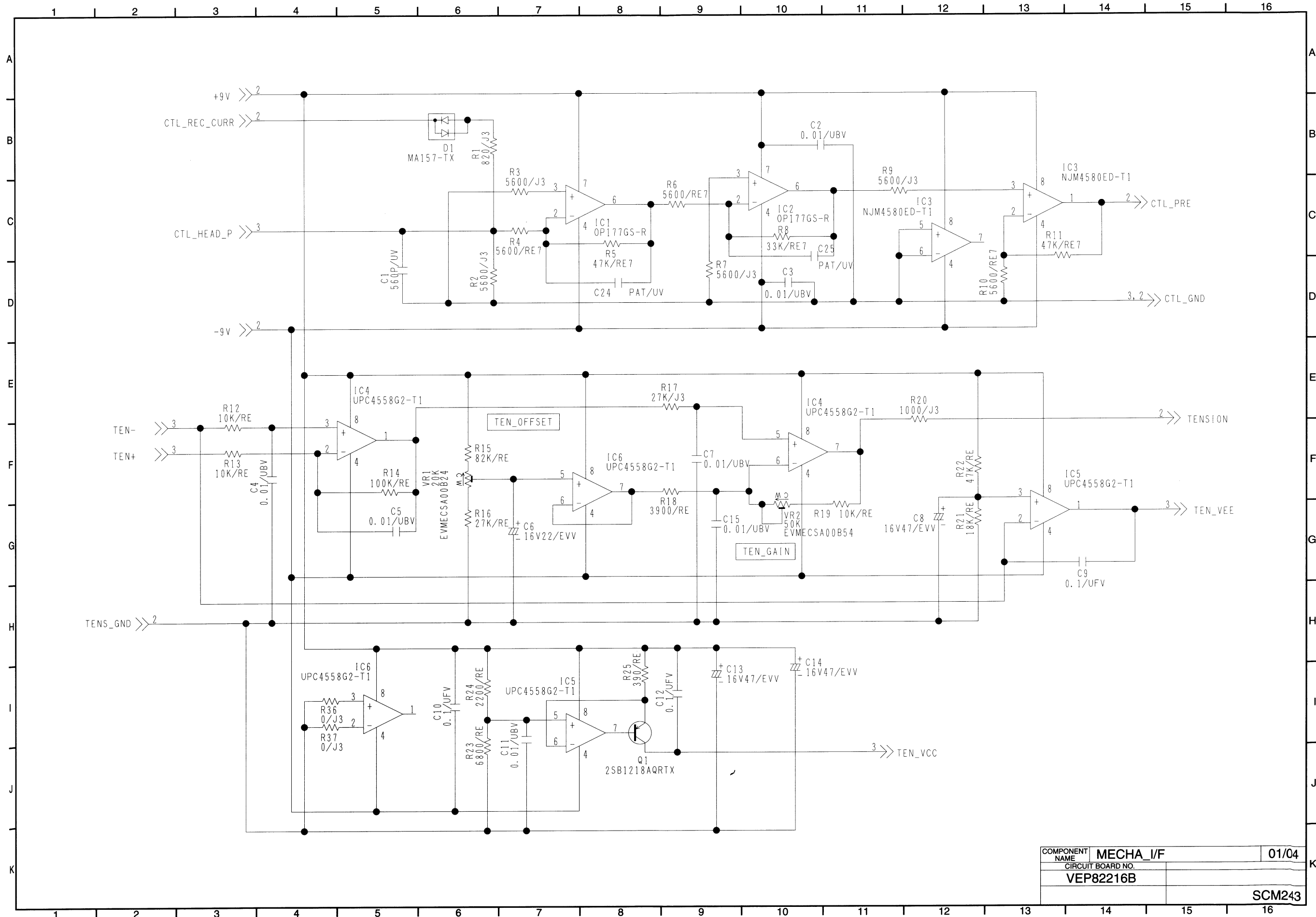




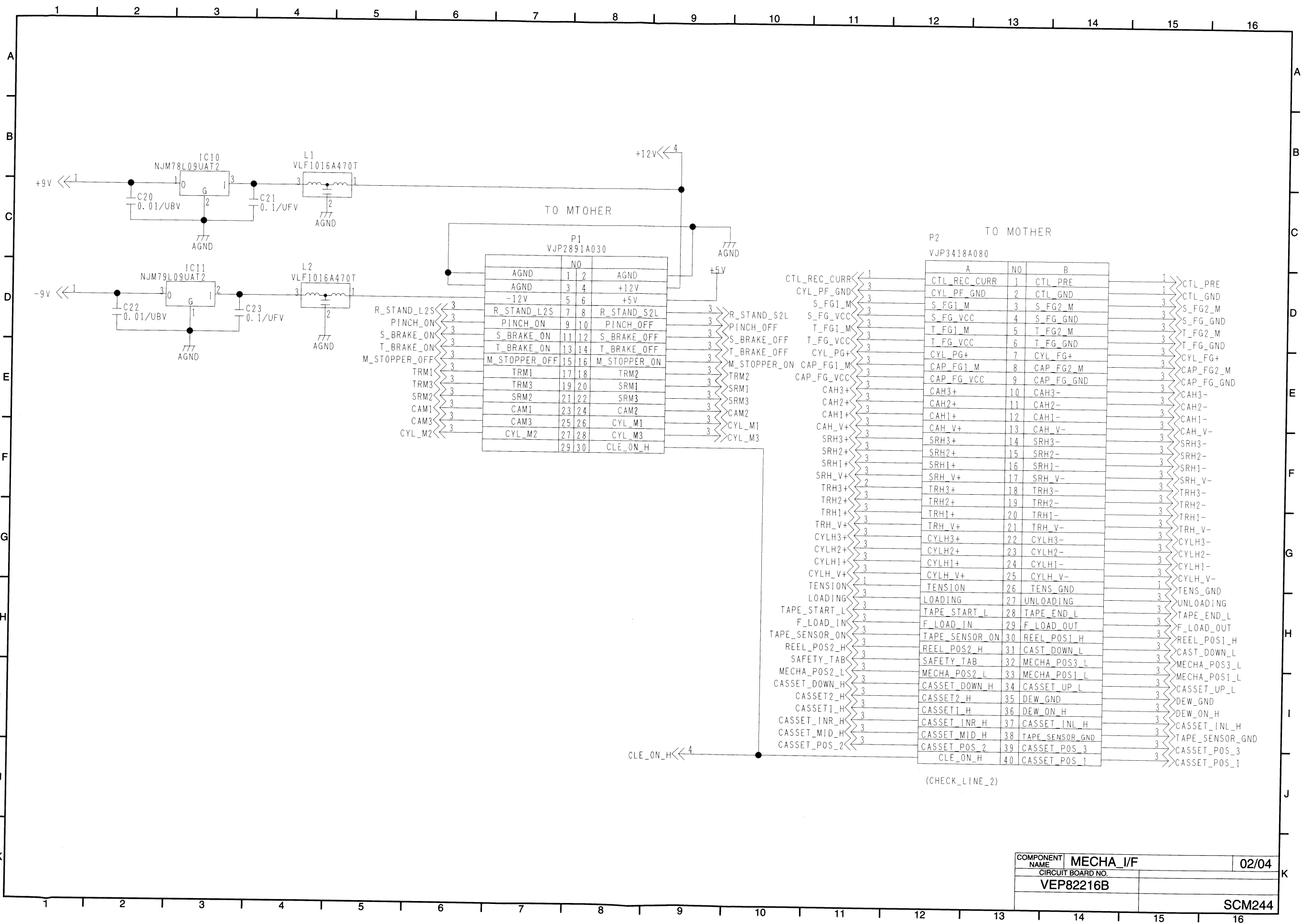
COMPONENT NAME	POWER2	02/02
CIRCUIT BOARD NO.	VEP81184A	
		SCM242

KR1C80(2/2)-3

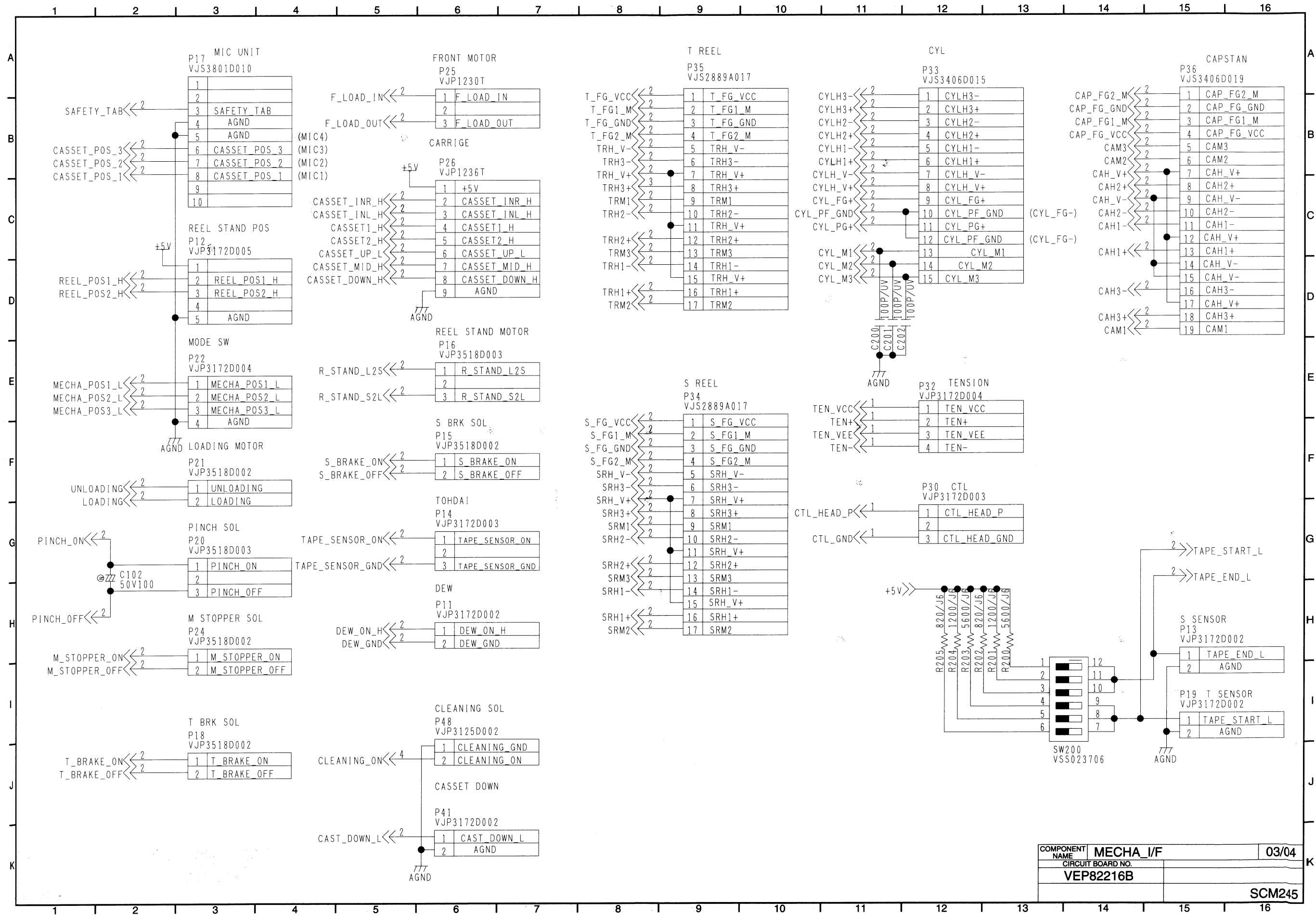
KR2C31(1/4)

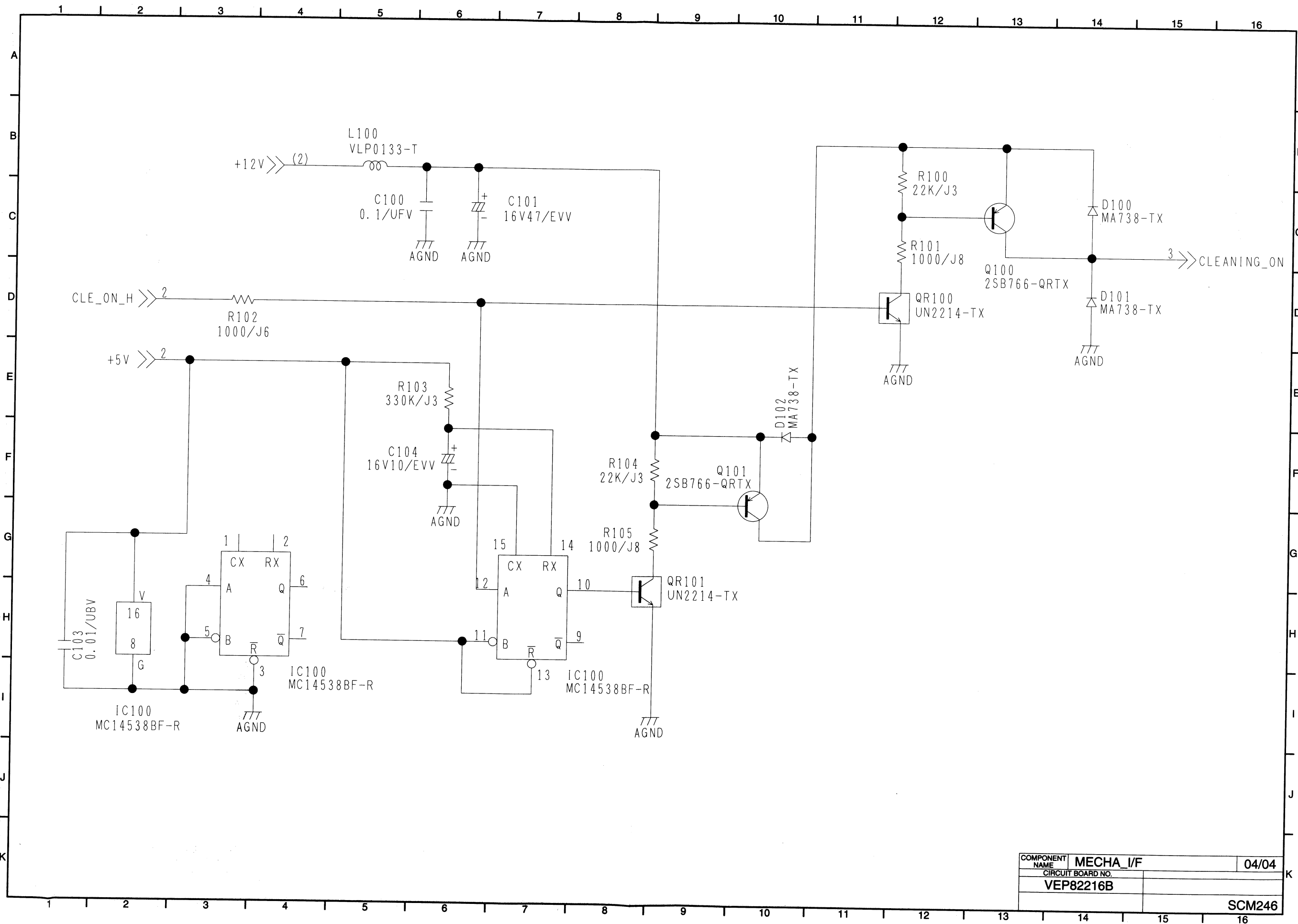


COMPONENT NAME	MECHA_I/F	01/04
CIRCUIT BOARD NO.	VEP82216B	
		SCM243



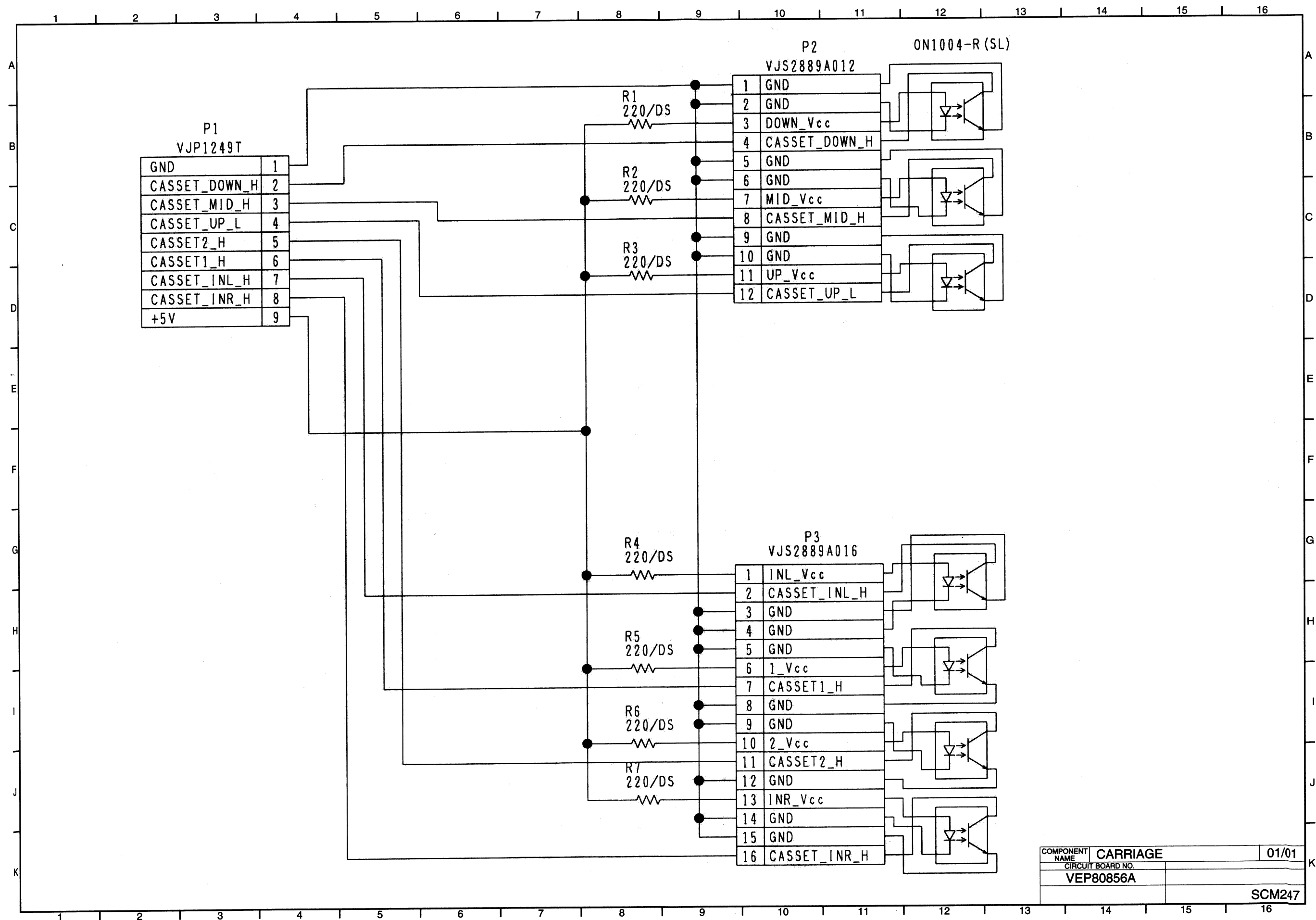
COMPONENT NAME	MECHA_I/F	02/04
CIRCUIT BOARD NO.	VEP82216B	
		SCM244



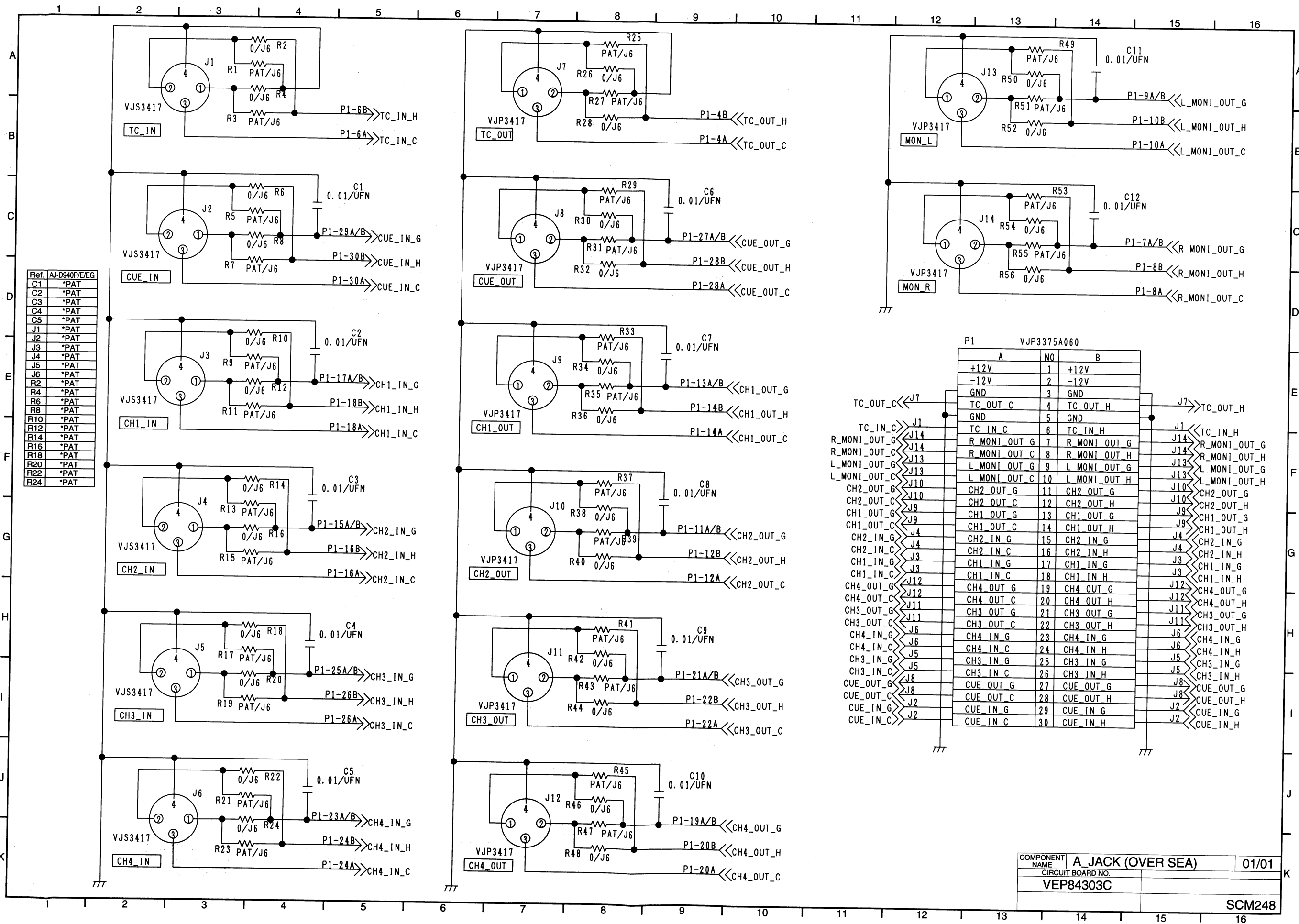


COMPONENT NAME	MECHA_I/F	04/04
CIRCUIT BOARD NO.	VEP82216B	
		SCM246

KR2C31(4/4)

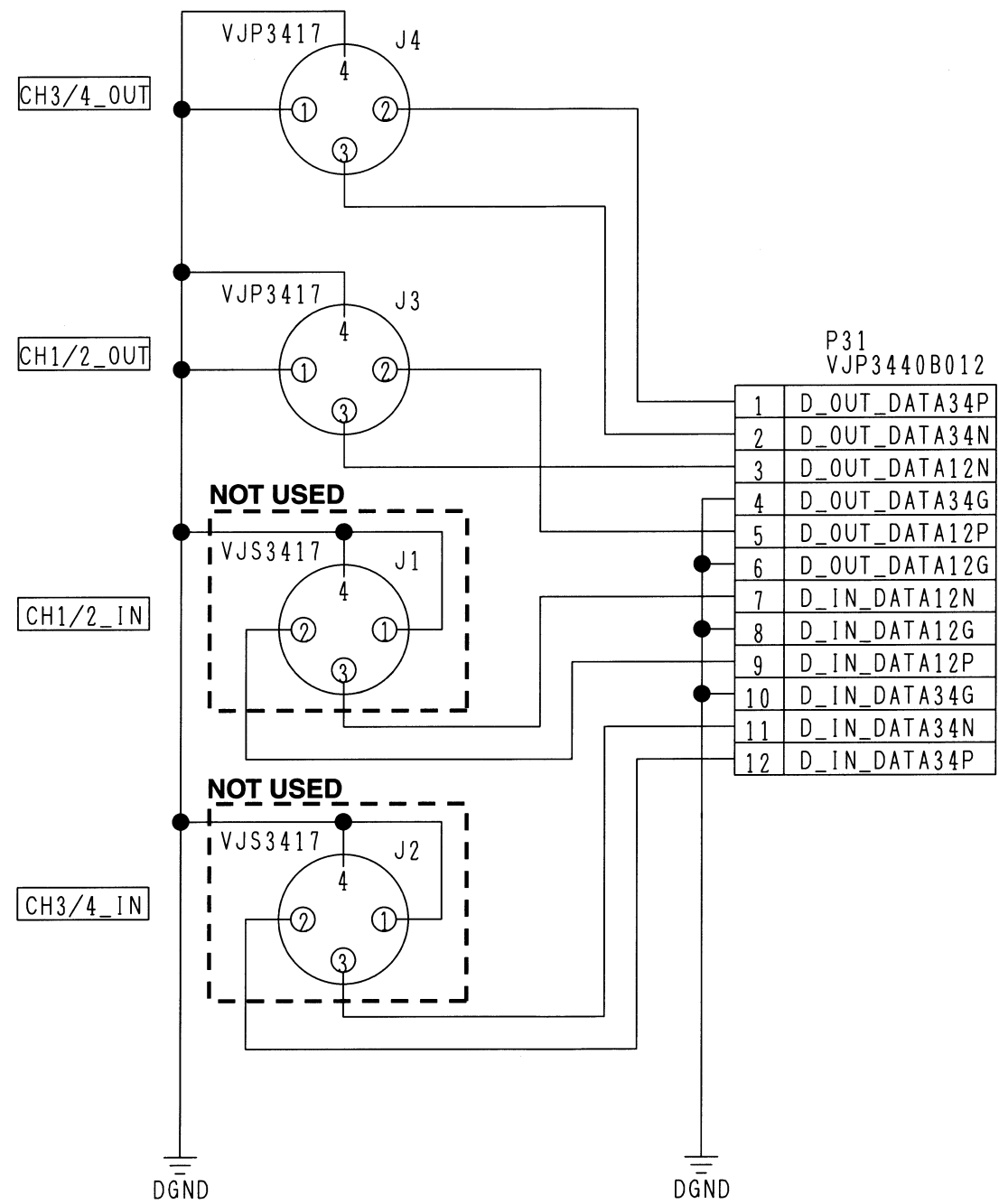


COMPONENT NAME	CARRIAGE	01/01
CIRCUIT BOARD NO.	VEP80856A	
		SCM247

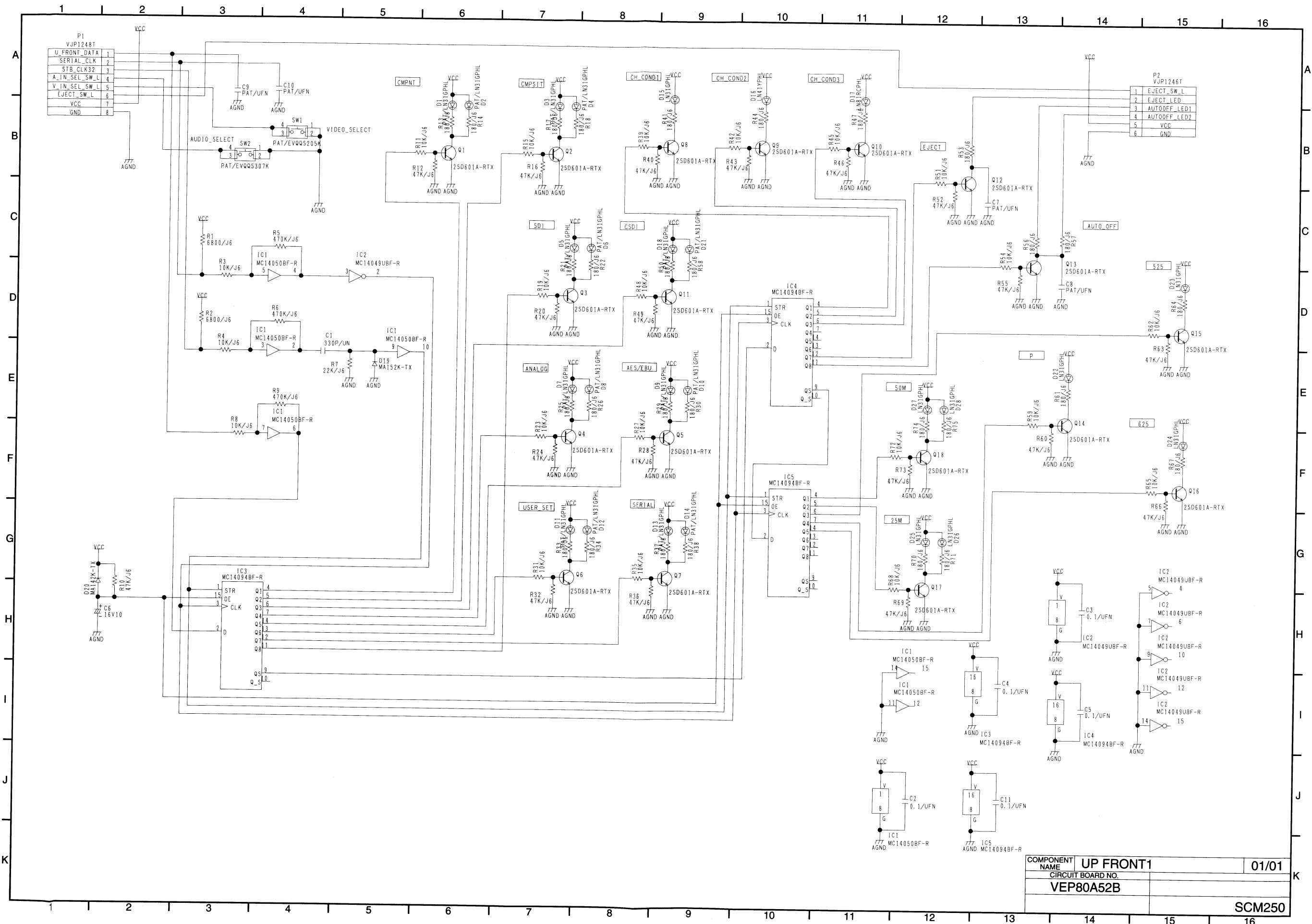


COMPONENT NAME	A JACK (OVER SEA)	01/01
CIRCUIT BOARD NO.	VEP84303C	
		SCM248

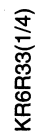
KR4F73-1(1/1)



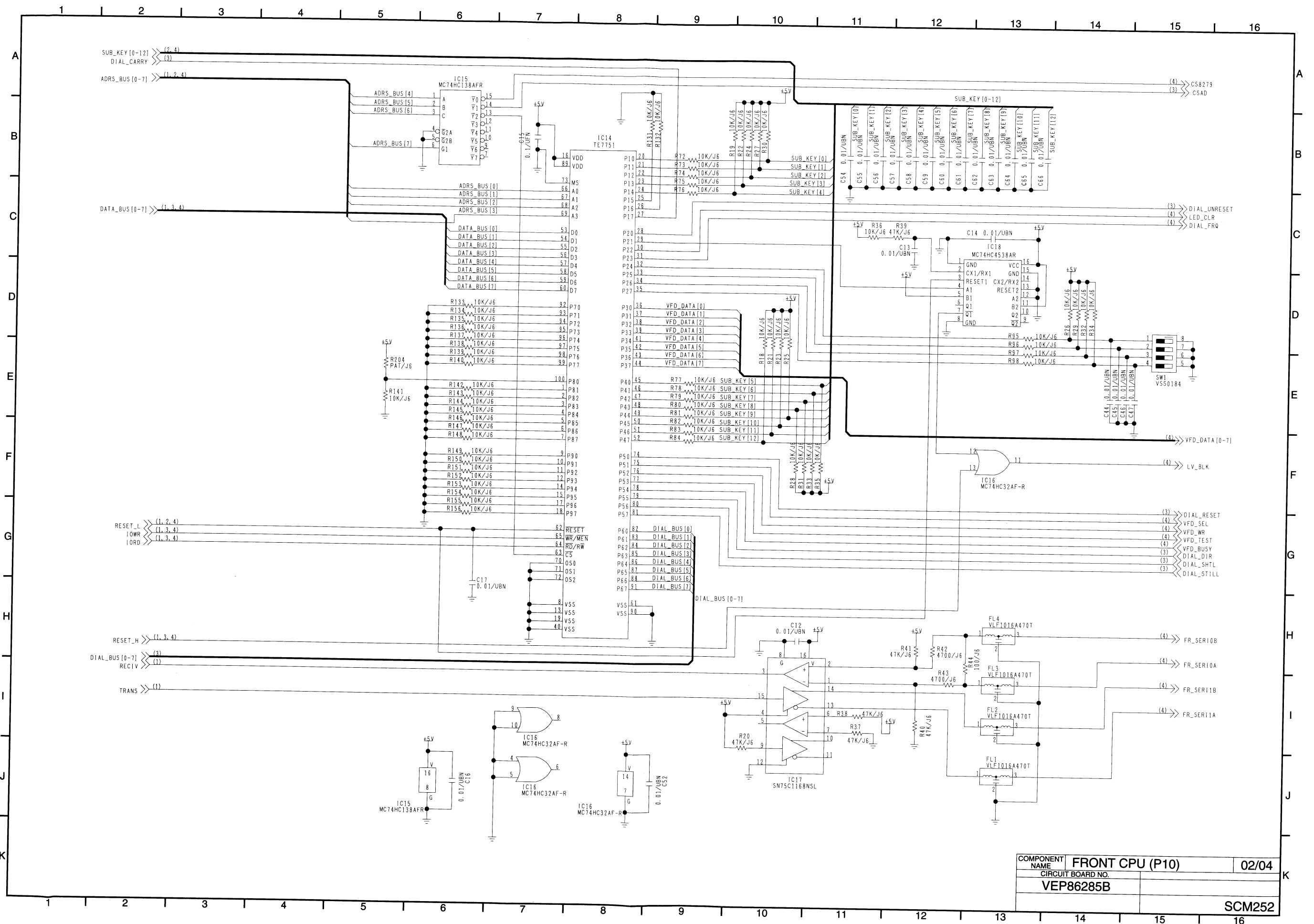
COMPONENT NAME	AES / EBU	01/01
CIRCUIT BOARD NO.	VEP84304B	
		SCM249

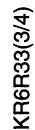


KROM51(1/1)



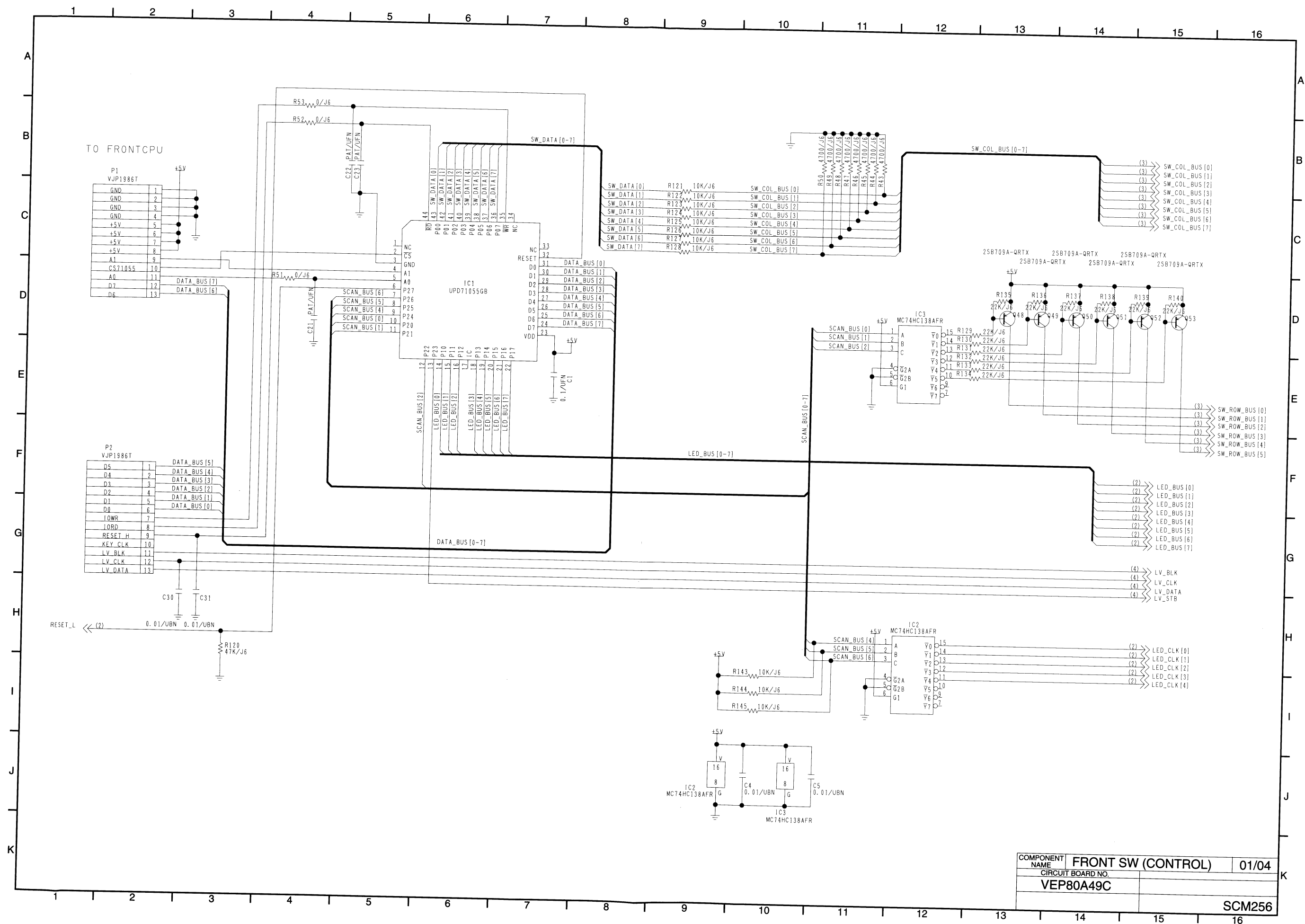
COMPONENT NAME	FRONT CPU (CPU)	01/04
CIRCUIT BOARD NO.		
VEP86285B		
SCM251		



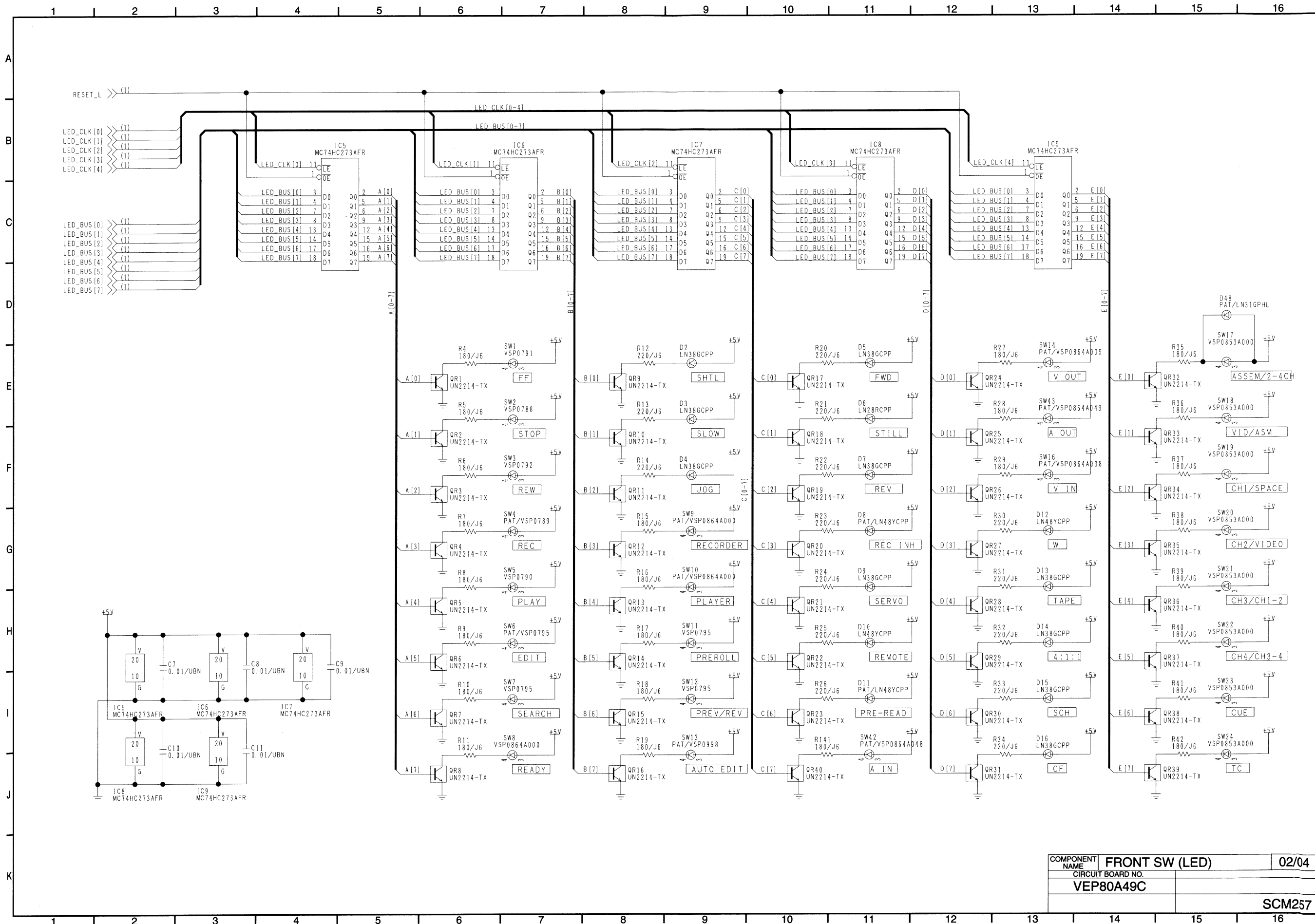




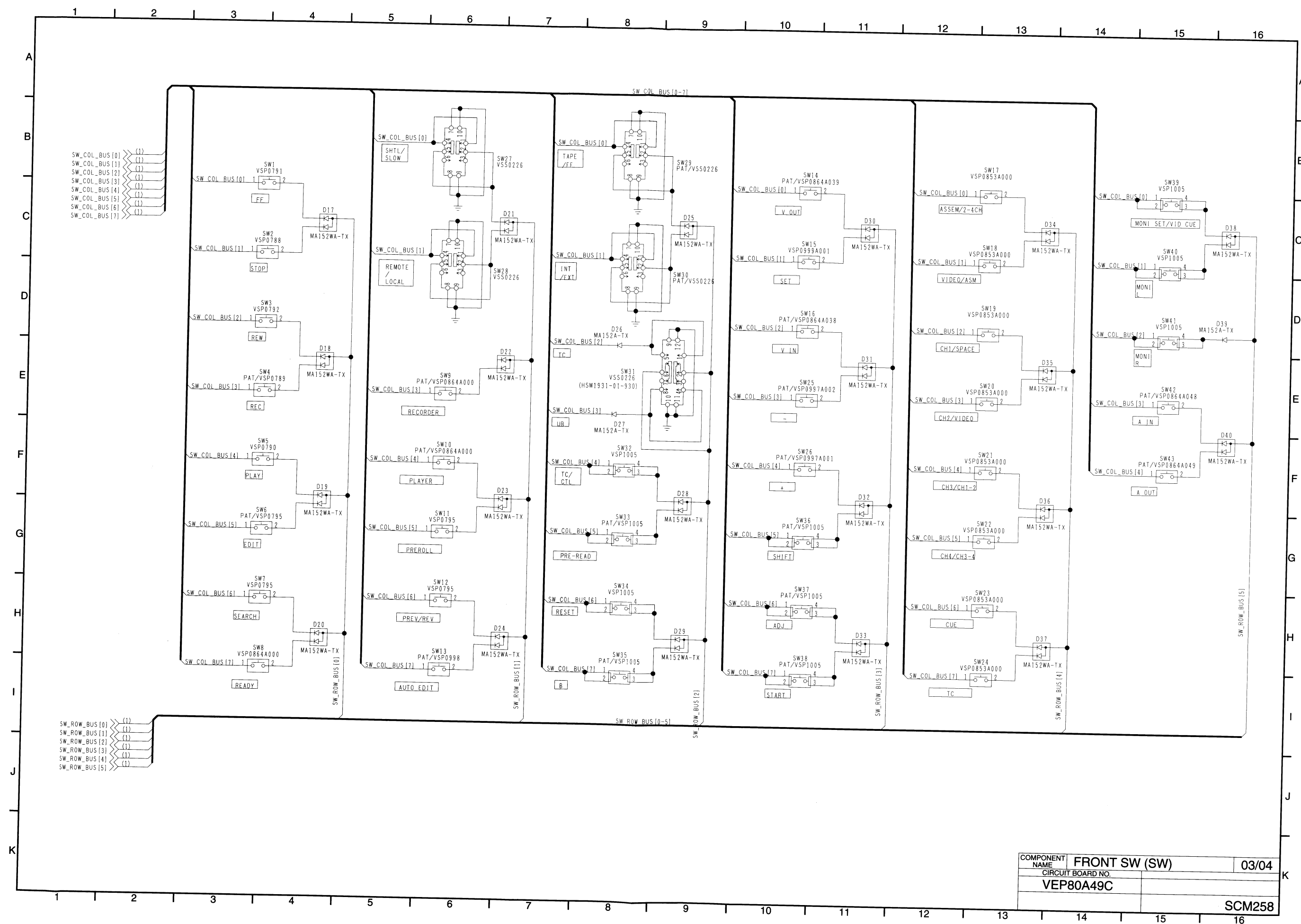
COMPONENT NAME	FRONT CPU SUB	01/01
CIRCUIT BOARD NO.		
VEP86148D		
SCM255		



KR0M52(1/4)

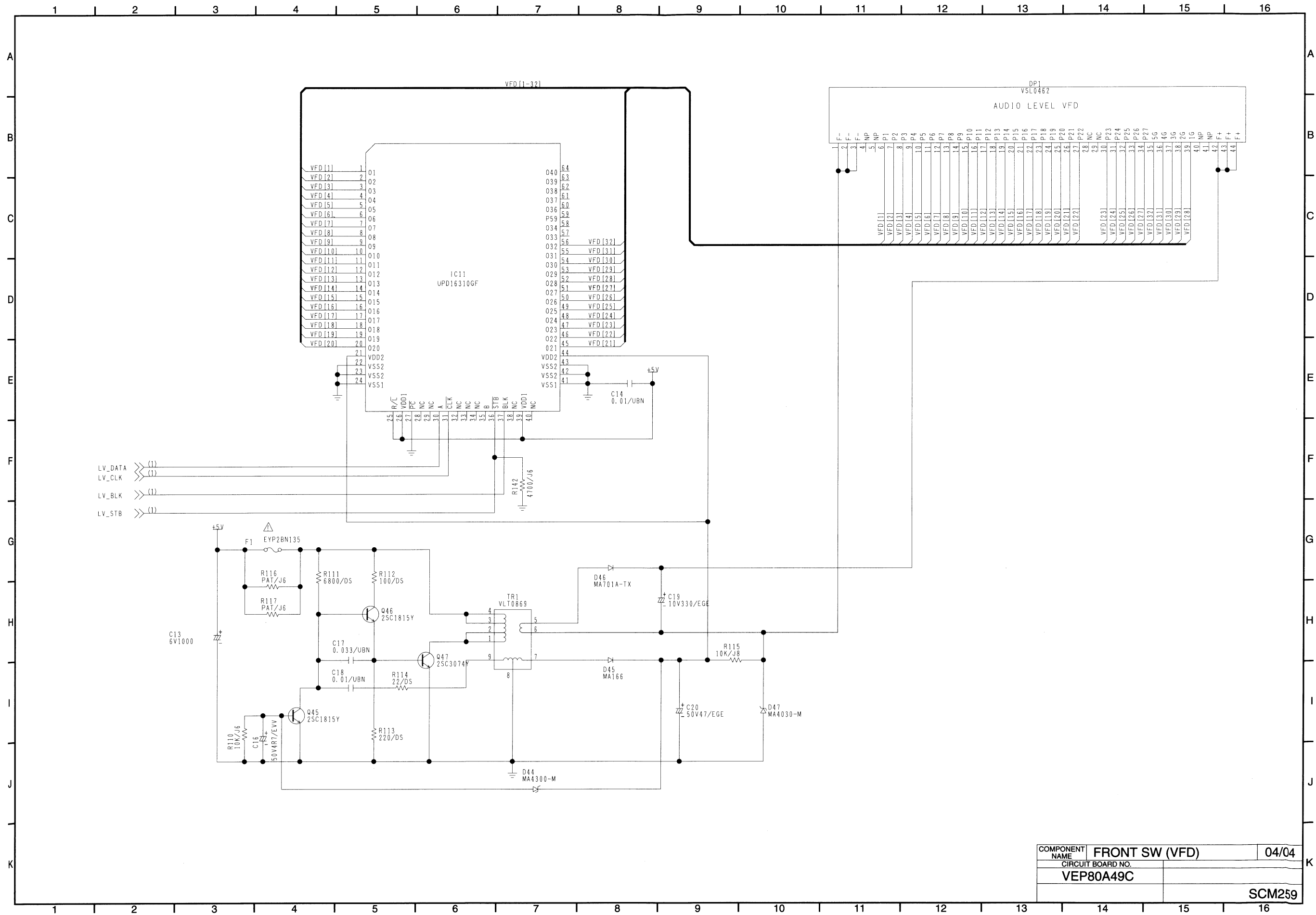


COMPONENT NAME	FRONT SW (LED)	02/04
CIRCUIT BOARD NO.	VEP80A49C	
		SCM257



KR0M52(3/4)

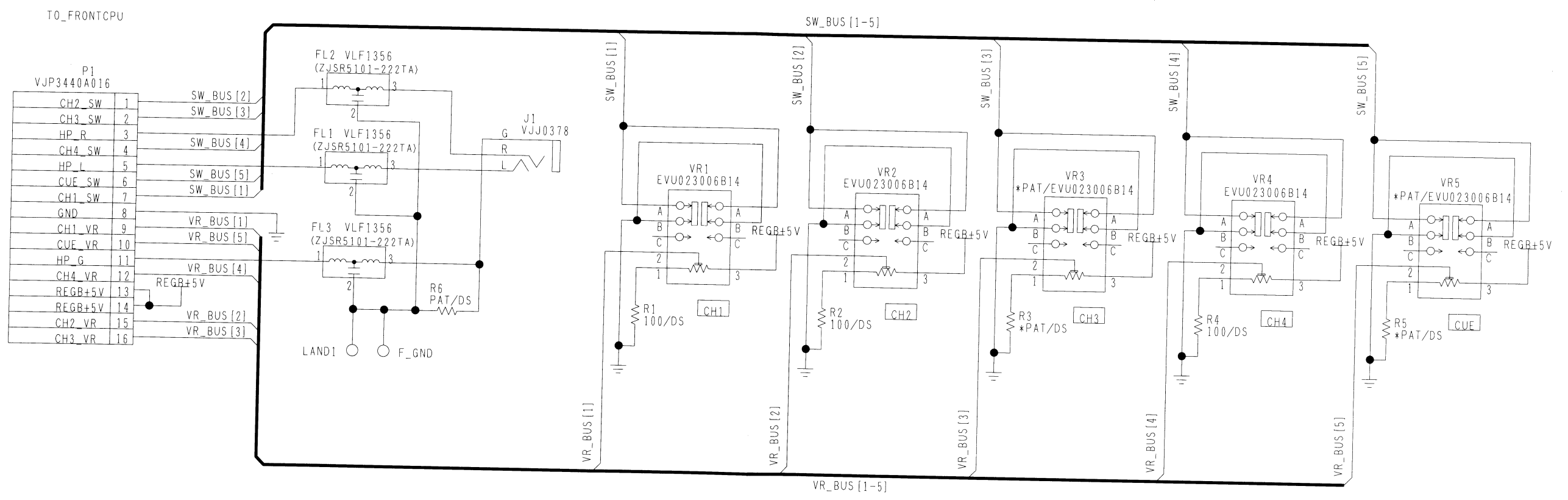
KR0M52(4/4)



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
B
C
D
E
F
G
H
I
J
K

A
B
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J
K



COMPONENT NAME	FRONT VR2	01/01
CIRCUIT BOARD NO.	VEP80B00A	
		SCM260

KR0M10(1/1)

SECTION 5

CIRCUIT BOARD DIAGRAMS


CONTENTS

MOTHER P.C. BOARD (VEP80A96A)	PCB-1
F1: SERVO P.C. BOARD (VEP82221A)	PCB-2
F2: SYSCON P.C. BOARD (VEP86284B)	PCB-4
F3: NON TRK P.C. BOARD (VEP83444A)	PCB-6
DV UCOM P.C. BOARD (VEP88234M)	PCB-7
F4: SDI MAIN P.C. BOARD (VEP83452A)	PCB-8
F5: PB P.C. BOARD (VEP83453A)	PCB-10
DV UCOM P.C. BOARD (VEP88234L)	PCB-11
F6: V OUT P.C. BOARD (VEP83454B)	PCB-12
4:2:2 DA SUB P.C. BOARD (VEP83385B)	PCB-14
F7: A PROC P.C. BOARD (VEP84326C)	PCB-16
F8: A ADDA P.C. BOARD (VEP84301C)	PCB-18
H1: CUE P.C. BOARD (VEP84302B)	PCB-20
H2/H3/H4: EQ P.C. BOARD (VEP85177A)	PCB-21
V BLK P.C. BOARD (VEP88235A)	PCB-22
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POWER 1 P.C. BOARD (VEP81183A)	PCB-24
POWER 2 P.C. BOARD (VEP81184A)	PCB-24
FRONT CPU P.C. BOARD (VEP86285B)	PCB-25
FRONT SW P.C. BOARD (VEP80A49C)	PCB-26
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FRONT VR1 P.C. BOARD (VEP80A99A)	PCB-27
FRONT VR2 P.C. BOARD (VEP80B00A)	PCB-27
AES/EBU P.C. BOARD (VEP84304B)	PCB-27
FRONT CPU SUB P.C. BOARD (VEP86148D)	PCB-27
V/S JACK P.C. BOARD (VEP83417B)	PCB-28
AUDIO JACK P.C. BOARD (VEP84303C)	PCB-28
MECHA I/F P.C. BOARD (VEP82216B)	PCB-28
CARRIGE P.C. BOARD (VEP80856A)	PCB-28


NOTE:

DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER SHOWN IN THE PARTS LIST.
AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

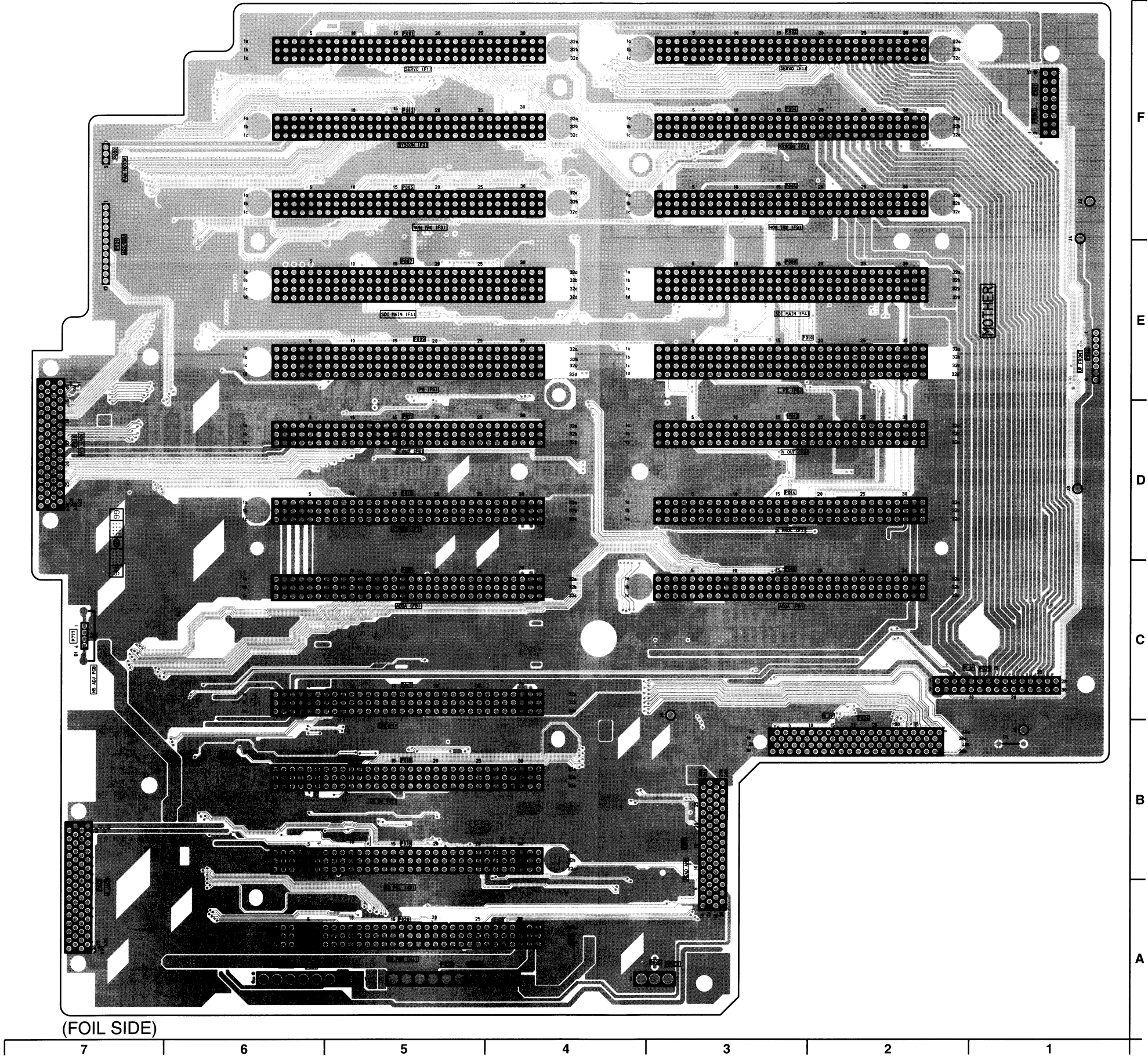
CAUTION

THE  MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

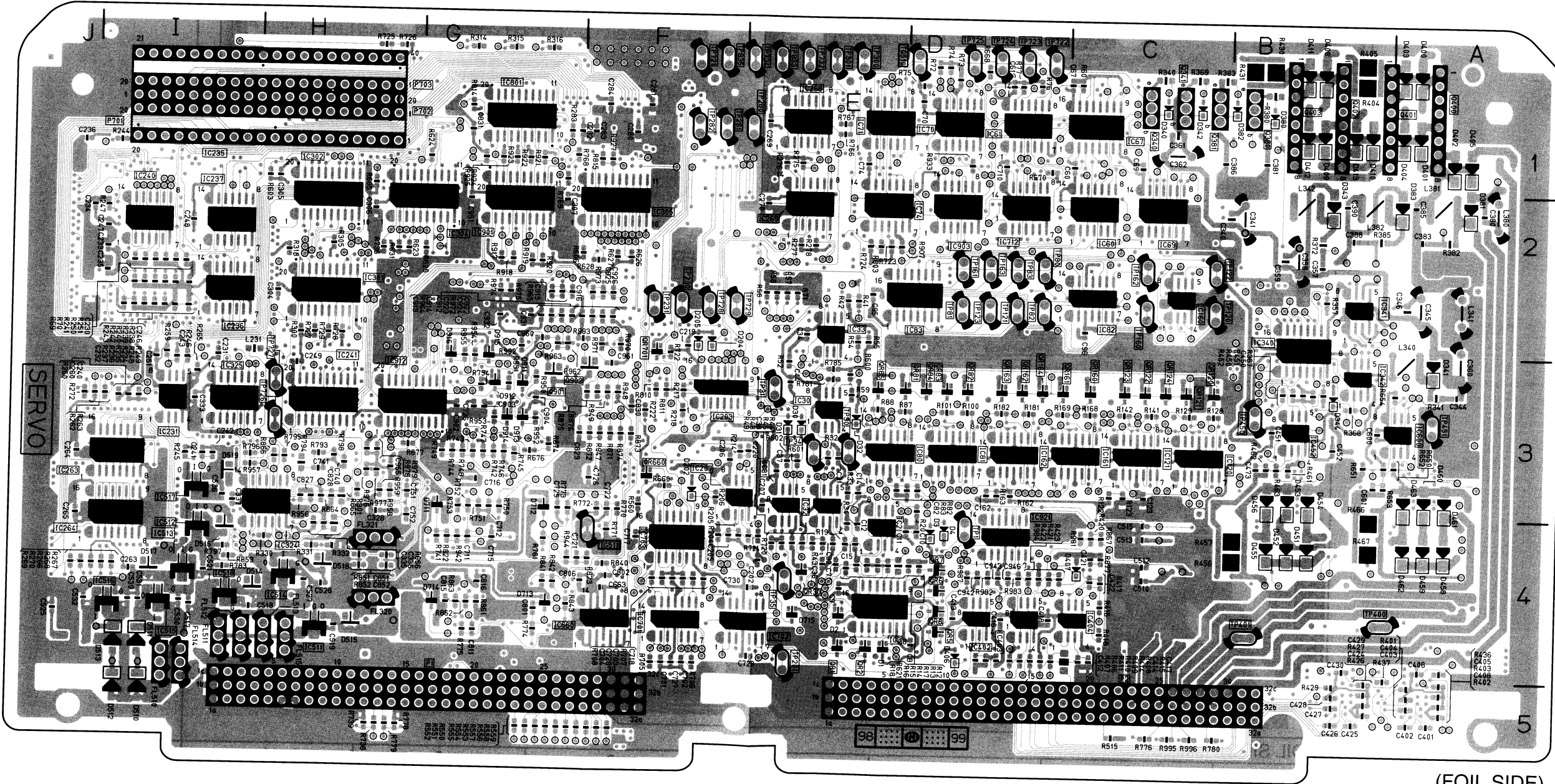
MOTHER P.C. BOARD (VEP80A96A)



F1: SERVO P.C. BOARD (VEP82221A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC2	E4	IC81	D3	IC241	H3	IC402	D4	IC701	F4	QR84	D3
IC3	E4	IC82	C2	IC263	I3	IC403	D4	IC702	F4	QR85	E3
IC30	E3	IC83	D2	IC264	I4	IC404	C4	IC703	F4	QR120	C3
IC31	E3	IC120	C3	IC268	E1	IC452	B3	IC712	D2	QR121	C3
IC32	E3	IC121	C3	IC269	E2	IC510	I4	IC903	D2	QR122	C3
IC33	E2	IC160	C2	IC301	H2	IC511	H4	IC921	D4	QR123	C3
IC60	C2	IC161	C3	IC302	H2	IC512	I4	QR5	D4	QR124	C3
IC61	D1	IC162	D3	IC304	H2	IC513	I4	QR6	D4	QR160	C3
IC67	C1	IC203	F3	IC305	F2	IC514	H4	QR7	D4	QR161	D3
IC69	C2	IC207	F3	IC324	I3	IC515	I4	QR8	D4	QR162	D3
IC70	D1	IC231	I3	IC325	I3	IC516	I4	QR30	E4	QR163	D3
IC71	E1	IC236	I2	IC340	B2	IC517	I3	QR81	D3	QR164	D3
IC74	E2	IC237	I2	IC341	B2	IC600	A3	QR82	D3	QR660	F3
IC80	E3	IC240	I2	IC342	B3	IC660	F4	QR83	D3	QR701	F3

(FOIL SIDE)

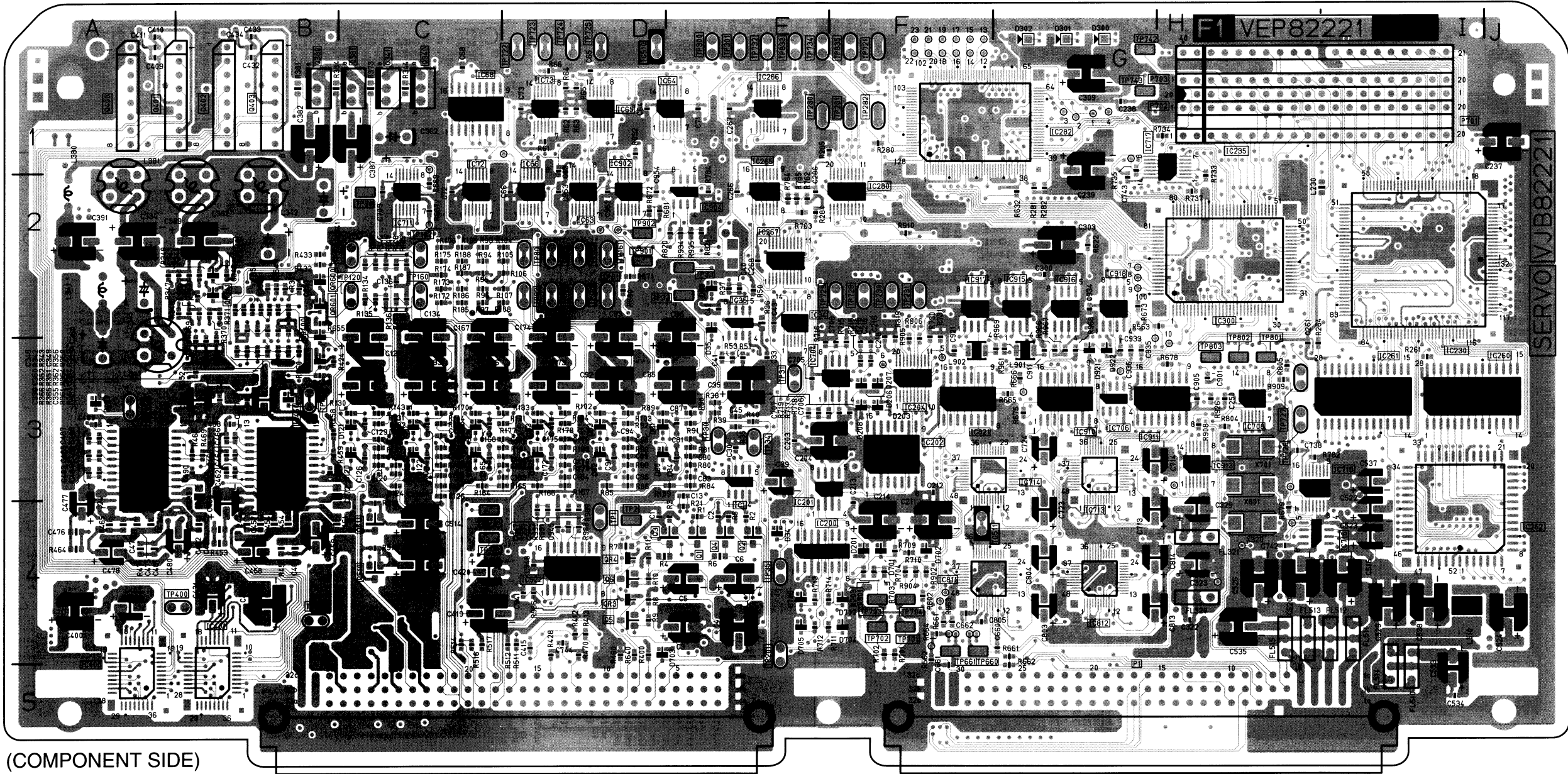


(FOIL SIDE)

F1: SERVO P.C. BOARD (VEP82221A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC34	E3	IC235	H1	IC704	F3	P1	G5	QR400	B3	TP80	D2	TP231	F2	TP703	F4	TP741	C4
IC35	E3	IC260	I3	IC708	H3	P2	D5	QR401	B3	TP81	D2	TP280	E1	TP704	F4	TP742	G1
IC63	D2	IC261	I3	IC711	C2	Q340	C1	QR600	B2	TP82	D2	TP281	F1	TP721	F1	TP743	G1
IC64	E1	IC262	I4	IC713	G3	Q341	C1	QR601	B2	TP83	D2	TP282	F1	TP722	D1	TP801	H3
IC65	D1	IC265	E2	IC714	F3	Q380	B1	TG510	D1	TP120	C2	TP300	E1	TP723	D1	TP802	H3
IC66	D2	IC266	E1	IC715	H3	Q381	C1	TG511	F4	TP121	D2	TP301	E1	TP724	D1	TP803	H3
IC68	C1	IC267	E2	IC716	H4	Q400	A1	TP2	D4	TP122	C2	TP400	A4	TP725	D1	TP901	D2
IC72	C2	IC280	F2	IC717	H1	Q401	A1	TP30	E3	TP123	D2	TP401	B4	TP726	H3	TP902	D2
IC73	D1	IC282	F1	IC821	F3	Q402	B1	TP31	E3	TP160	C2	TP450	B3	TP727	H3	X320	H4
IC200	E4	IC300	H2	IC902	D2	Q403	B1	TP32	E2	TP161	D2	TP451	A3	TP728	F2	X701	H3
IC201	F3	IC400	A5	IC904	E2	Q510	C4	TP33	E2	TP162	C2	TP660	F4	TP729	F2	X801	H3
IC202	F3	IC401	B5	IC910	G3	Q511	C4	TP34	E3	TP163	D2	TP661	F4	TP731	C4		
IC204	F3	IC450	B3	IC922	D4	QR340	B2	TP35	E4	TP201	E5	TP701	F4	TP732	E1		
IC230	I2	IC451	A3	IS235	H1	QR341	B2	TP60	C2	TP230	F2	TP702	F4	TP734	E1		

(COMPONENT SIDE)

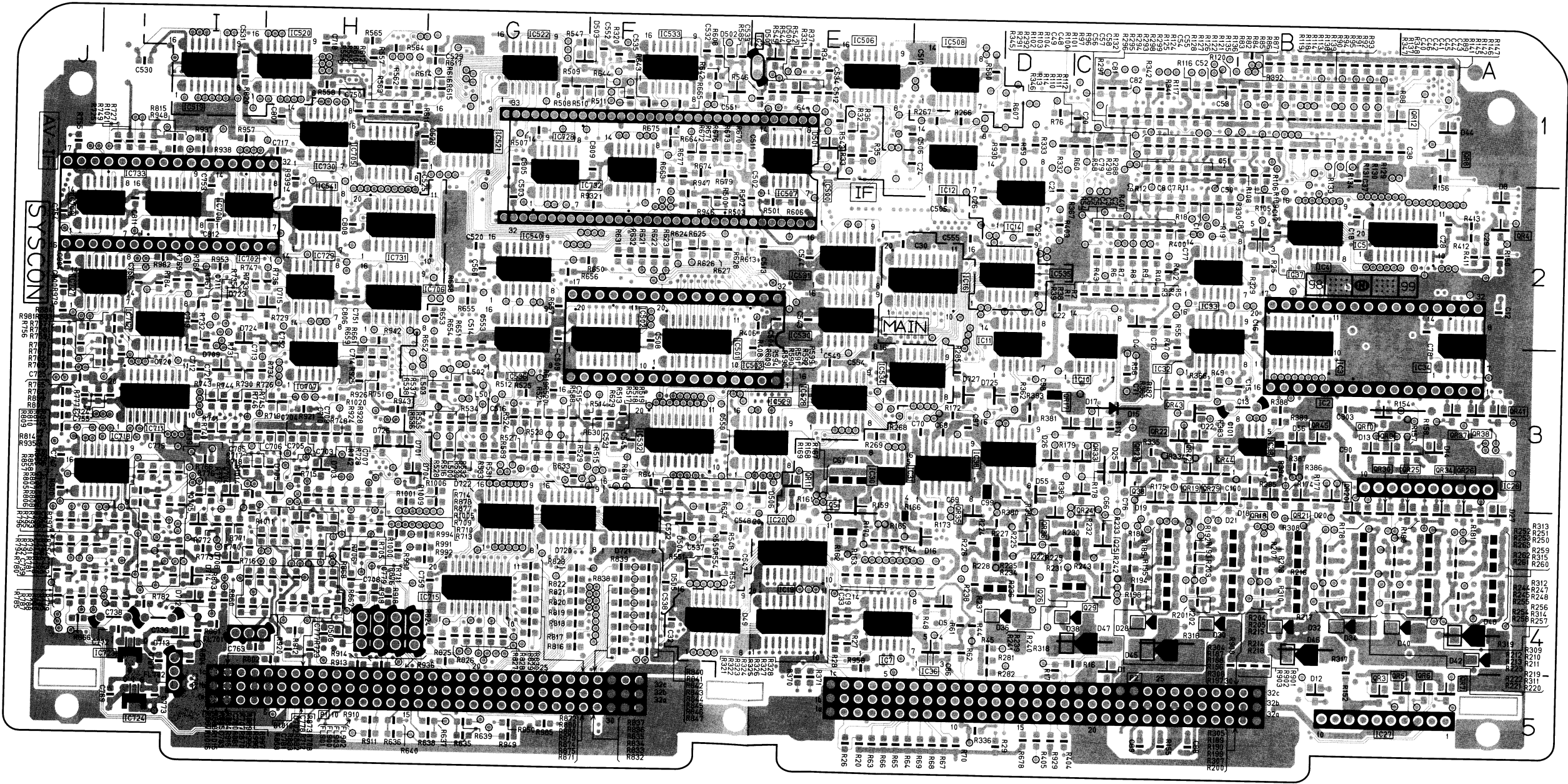


(COMPONENT SIDE)

F2: SYSCON P.C. BOARD (VEP86284B)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3	B3	IC33	C2	IC522	G1	IC709	J2	Q5	E3	QR9	B3	QR29	C3
IC4	B2	IC34	A3	IC528	E3	IC711	I3	Q22	D4	QR10	B3	QR30	B3
IC5	A2	IC36	D4	IC529	E3	IC712	I3	Q25	C4	QR11	E3	QR33	C3
IC7	E4	IC37	B2	IC530	E2	IC715	G4	Q26	D4	QR12	B1	QR34	A3
IC10	C3	IC38	D3	IC531	E2	IC718	I3	Q29	C4	QR17	C3	QR35	D4
IC11	D3	IC39	B3	IC532	F3	IC723	I5	Q38	C3	QR18	B3	QR36	D4
IC12	D1	IC501	F3	IC534	D3	IC724	I5	Q704	I3	QR19	C3	QR37	A3
IC14	D2	IC502	F3	IC535	D2	IC727	I2	Q705	I4	QR20	B3	QR38	A3
IC16	D2	IC506	E1	IC536	G3	IC728	G2	QR3	B5	QR21	B3	QR41	A3
IC19	E4	IC507	E1	IC541	H2	IC729	H2	QR4	A2	QR22	C3	QR43	C3
IC20	E4	IC508	D1	IC705	H1	IC730	H1	QR5	A5	QR23	C3	QR44	C3
IC30	E3	IC519	I1	IC706	H2	IC731	H2	QR6	A5	QR24	C3	QR45	B3
IC31	D3	IC520	H1	IC707	H3	IC732	F2	QR7	A5	QR25	A3		
IC32	C3	IC521	G1	IC708	I2	IC733	I2	QR8	A1	QR26	A3		

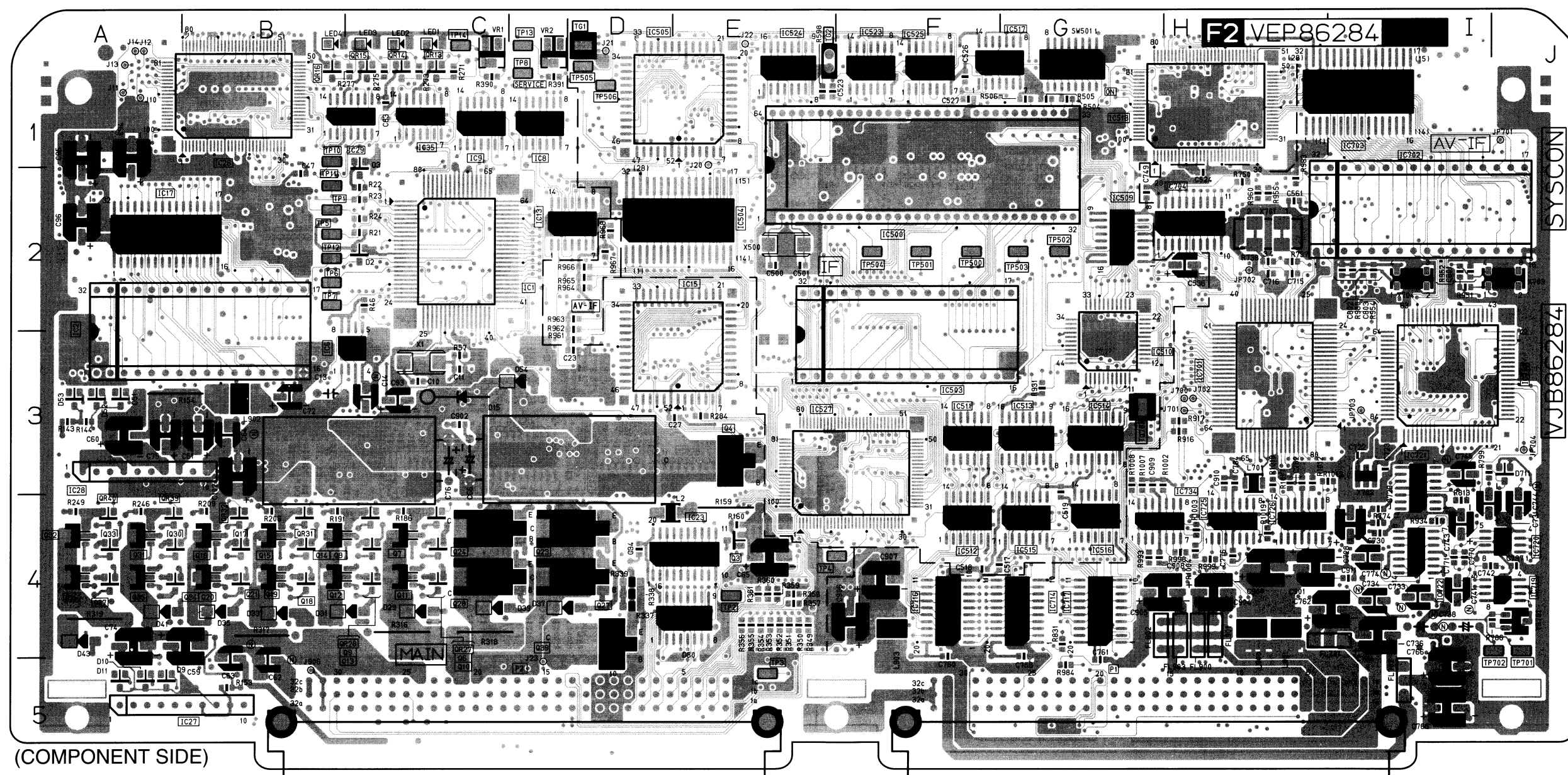
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F2: SYSCON P.C. BOARD (VEP86284B)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	C2	IC500	E2	IC523	F1	IC721	I3	Q8	B4	Q23	D4	QR14	C1	TP14	C1
IC2	A3	IC503	E3	IC524	E1	IC722	I4	Q9	C4	Q24	C4	QR15	C1	X1	C3
IC6	C3	IC504	E2	IC525	F1	IC725	H4	Q10	C4	Q27	D4	QR16	B1	X500	E2
IC8	D1	IC505	E1	IC527	F3	IC726	H4	Q11	C4	Q28	C4	QR27	C4	X701	H2
IC9	C1	IC509	G2	IC701	H3	IC734	G4	Q12	B4	Q30	B4	QR28	C4	X702	I3
IC13	D2	IC510	G3	IC702	H2	IS2	A3	Q13	C4	Q31	A4	QR31	B4		
IC15	E3	IC511	F3	IC703	I1	IS503	E3	Q14	B4	Q32	A4	QR32	B4		
IC17	A2	IC512	F4	IC704	H2	IS702	H2	Q15	B4	Q33	A4	QR39	A4		
IC23	E4	IC513	G3	IC710	I3	P1	G5	Q16	B4	Q34	B4	QR40	A4		
IC26	B1	IC514	G3	IC714	G4	P2	D5	Q17	B4	Q35	A4	SW501	G1		
IC27	A5	IC515	G4	IC716	F4	Q3	E4	Q18	B4	Q36	A4	TG1	D1		
IC28	A3	IC516	G4	IC717	G4	Q4	E3	Q19	B4	Q37	A4	TG701	G3		
IC29	C1	IC517	F1	IC719	J4	Q6	C4	Q20	B4	Q39	D4	TP8	D1		
IC35	C1	IC518	H1	IC720	J4	Q7	C4	Q21	B4	QR13	C1	TP13	D1		

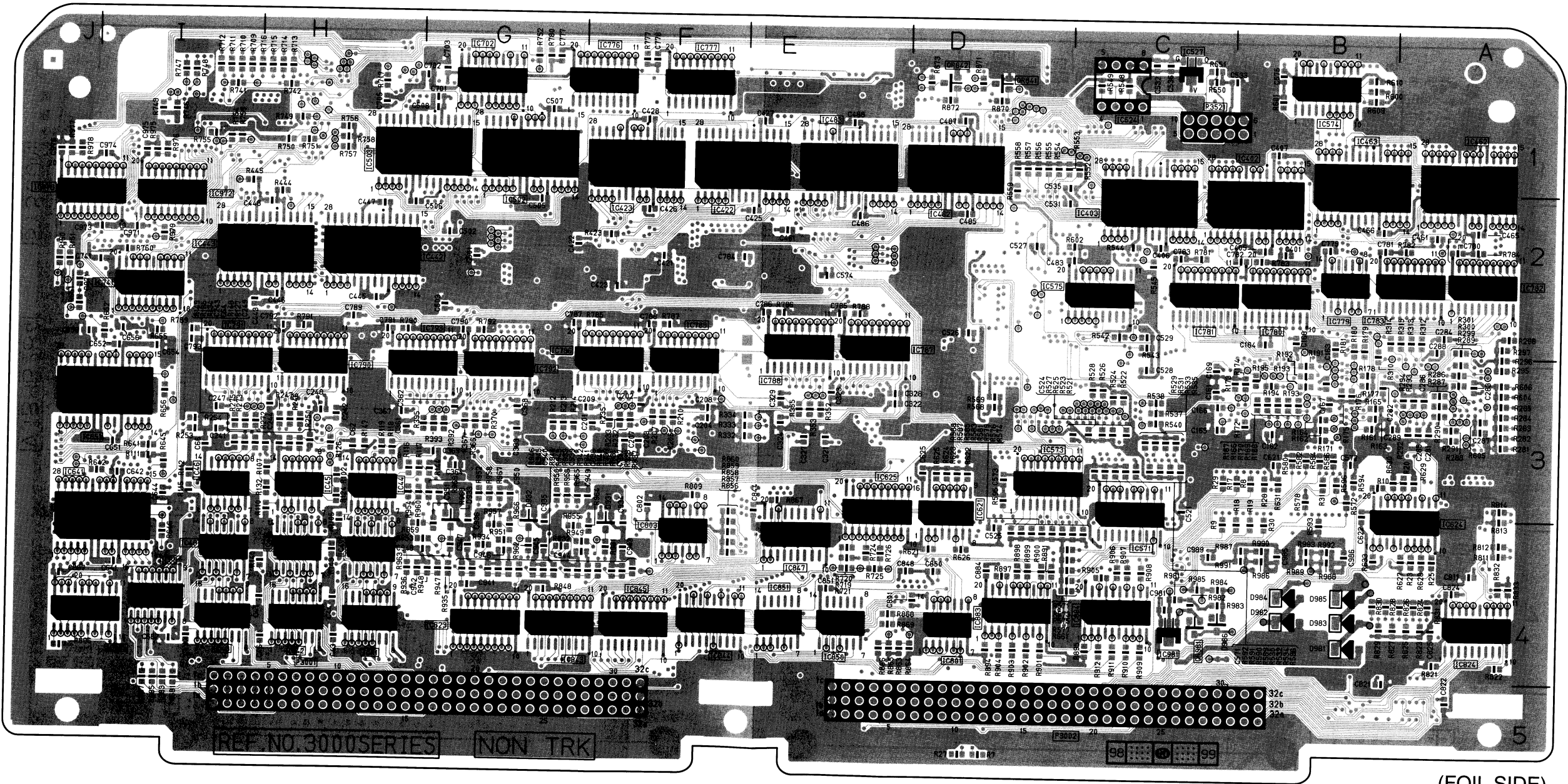
(COMPONENT SIDE)



F3: NON TRK P.C. BOARD (VEP83444A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3041	H4	IC3502	G1	IC3741	I2	IC3792	G3	IC3972	I2
IC3042	H4	IC3527	C1	IC3776	F1	IC3793	G3	IC3973	J2
IC3043	I4	IC3571	C3	IC3777	F1	IC3801	D4	QR3841	D1
IC3044	H3	IC3573	D3	IC3779	B2	IC3803	F4	QR3842	D1
IC3045	H3	IC3574	B1	IC3780	B2	IC3824	A4		
IC3046	I3	IC3575	C2	IC3781	C2	IC3843	G4		
IC3047	H4	IC3621	D3	IC3782	A2	IC3844	F4		
IC3048	H4	IC3623	G4	IC3783	A2	IC3845	F4		
IC3049	I4	IC3624	A4	IC3785	F3	IC3847	E4		
IC3402	B2	IC3625	E3	IC3786	F3	IC3850	E4		
IC3422	F1	IC3641	I4	IC3787	E2	IC3851	E4		
IC3442	H2	IC3651	I3	IC3788	E2	IC3883	D4		
IC3462	A1	IC3681	I4	IC3790	H3	IC3884	C4		
IC3482	D1	IC3702	G1	IC3791	I3	IC3885	J4		

(FOIL SIDE)



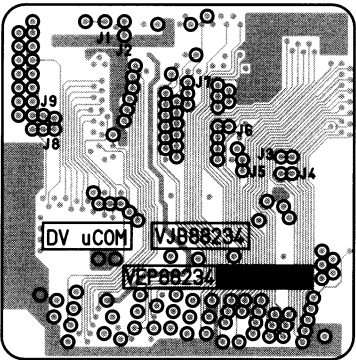
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F3: NON TRK P.C. BOARD (VEP83444A)

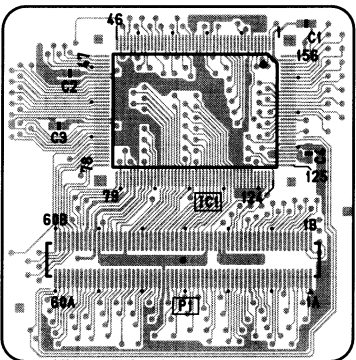
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3161	B3	IC3523	D2	IC3778	F1	IC3881	D4	P3001	G5	TP3523	B2
IC3201	F3	IC3524	C1	IC3784	F2	IC3882	C4	P3002	D5	TP3524	C2
IC3241	H3	IC3525	D1	IC3789	H2	IC3931	F4	P3571	B1	TP3539	C3
IC3281	A3	IC3526	C1	IC3802	E4	IC3932	G4	P3741	I1	TP3543	C3
IC3321	E3	IC3572	B3	IC3804	F4	IC3933	G4	TG3401	B2	TP3544	C3
IC3361	G3	IC3622	B3	IC3811	A4	IC3934	G4	TG3521	D1	TP3548	C2
IC3401	B2	IC3642	I3	IC3821	A5	IC3935	G4	TG3741	G1	TP3557	A3
IC3421	F2	IC3652	I3	IC3822	B5	IC3936	G4	TP3401	C2	TP3558	C2
IC3441	H2	IC3701	G1	IC3823	A4	IC3937	G4	TP3421	G2	TP3559	C2
IC3461	A2	IC3771	F1	IC3825	B4	IC3938	G4	TP3441	I2	TP3714	D4
IC3481	E2	IC3772	E1	IC3841	G4	IC3939	G4	TP3461	B2	TP3715	G1
IC3501	G2	IC3773	F1	IC3842	F4	IC3971	I2	TP3481	F2	TP3742	B3
IC3521	C3	IC3774	F1	IC3846	E4	IC3983	B4	TP3501	H2	X3881	C4
IC3522	D3	IC3775	E1	IC3848	D4	IS3524	C1	TP3522	D1	X3882	J4

(COMPONENT SIDE)

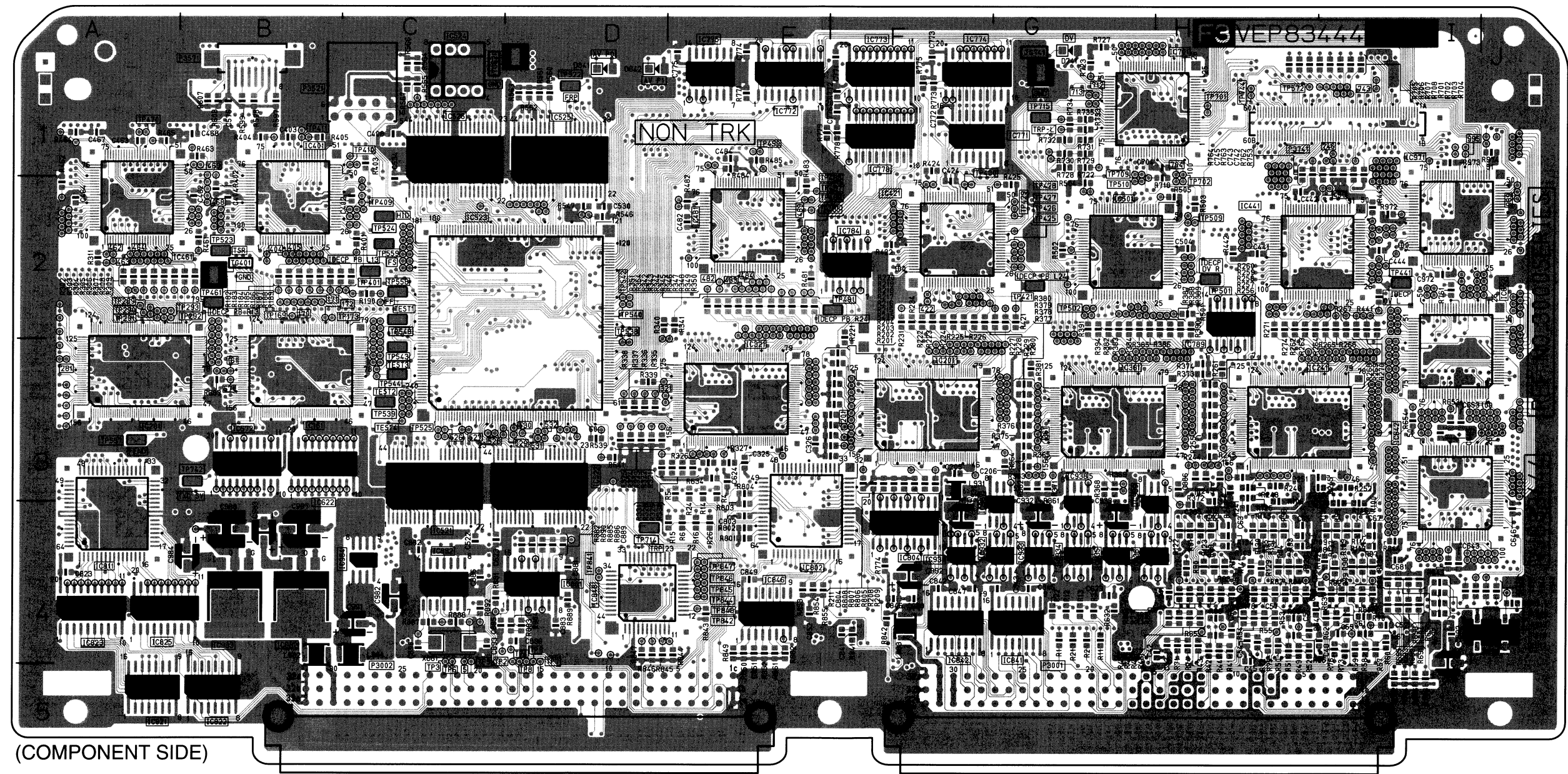
DV UCOM P.C. BOARD (VEP88234M)



(FOIL SIDE)



(COMPONENT SIDE)

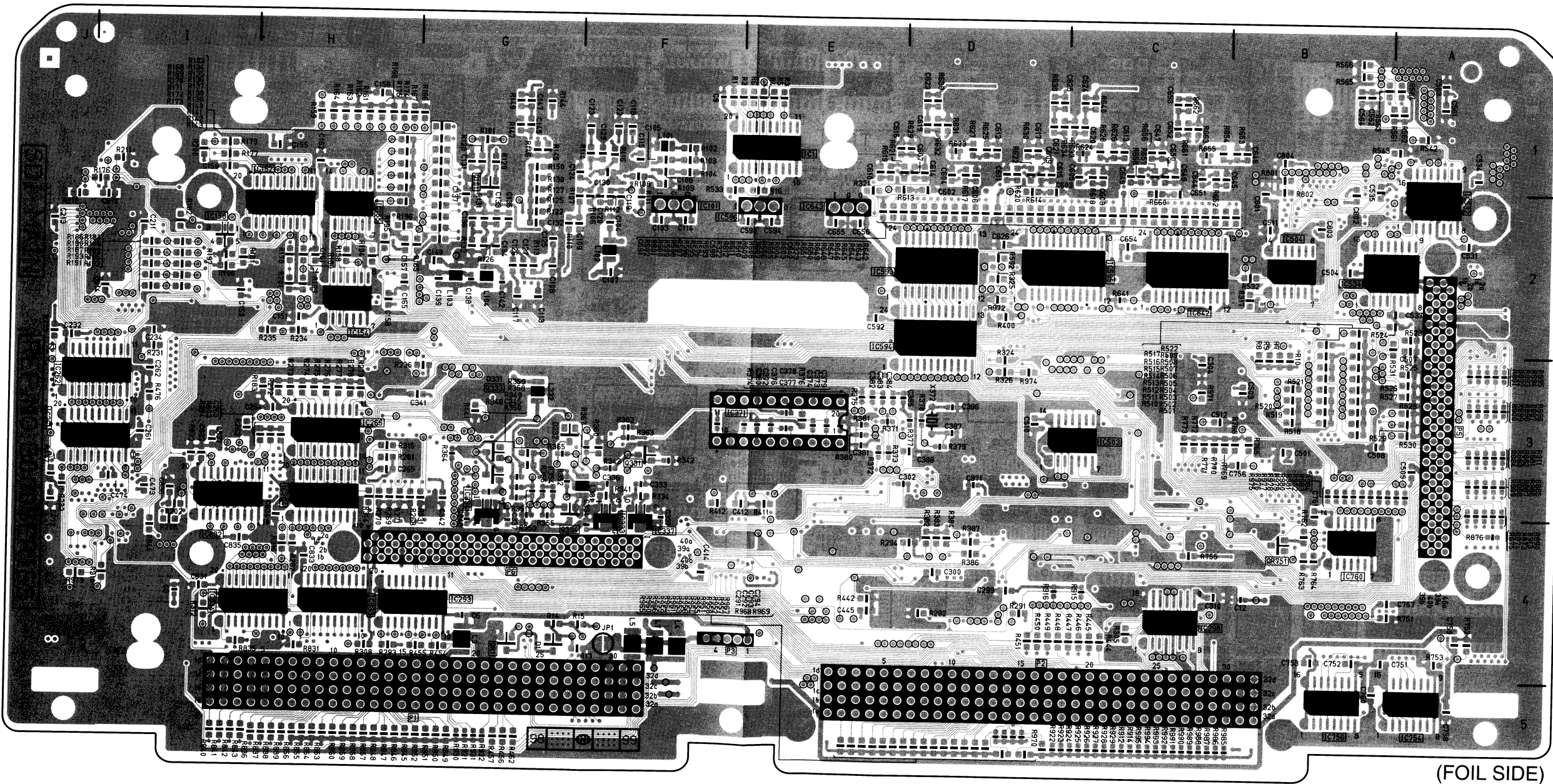


(COMPONENT SIDE)

F4: SDI MAIN P.C. BOARD (VEP83452A)

REF	LOC	REF	LOC	REF	LOC
IC294	E4	IC641	C1	P6	G4
IC297	C4	IC643	E2	P591	D1
IC299	C3	IC751	B4	P592	C1
IC300	C2	IC752	A5	P593	C1
IC301	C2	IC753	A4	P641	C1
IC302	D2	IC755	B5	TG1	F1
IC443	E4	IC758	C4	TG3	I4
IC501	B3	IC759	B4	TG4	A4
IC502	B4	IC801	B2	TP331	F3
IC531	A1	P1	H4	TP371	D3
IC561	A1	P2	D4	TP372	D3
IC591	D1	P3	F4	TP411	F3
IC592	D1	P4	E1	TP412	E4
IC596	E2	P5	A3	TP413	F4

(FOIL SIDE)

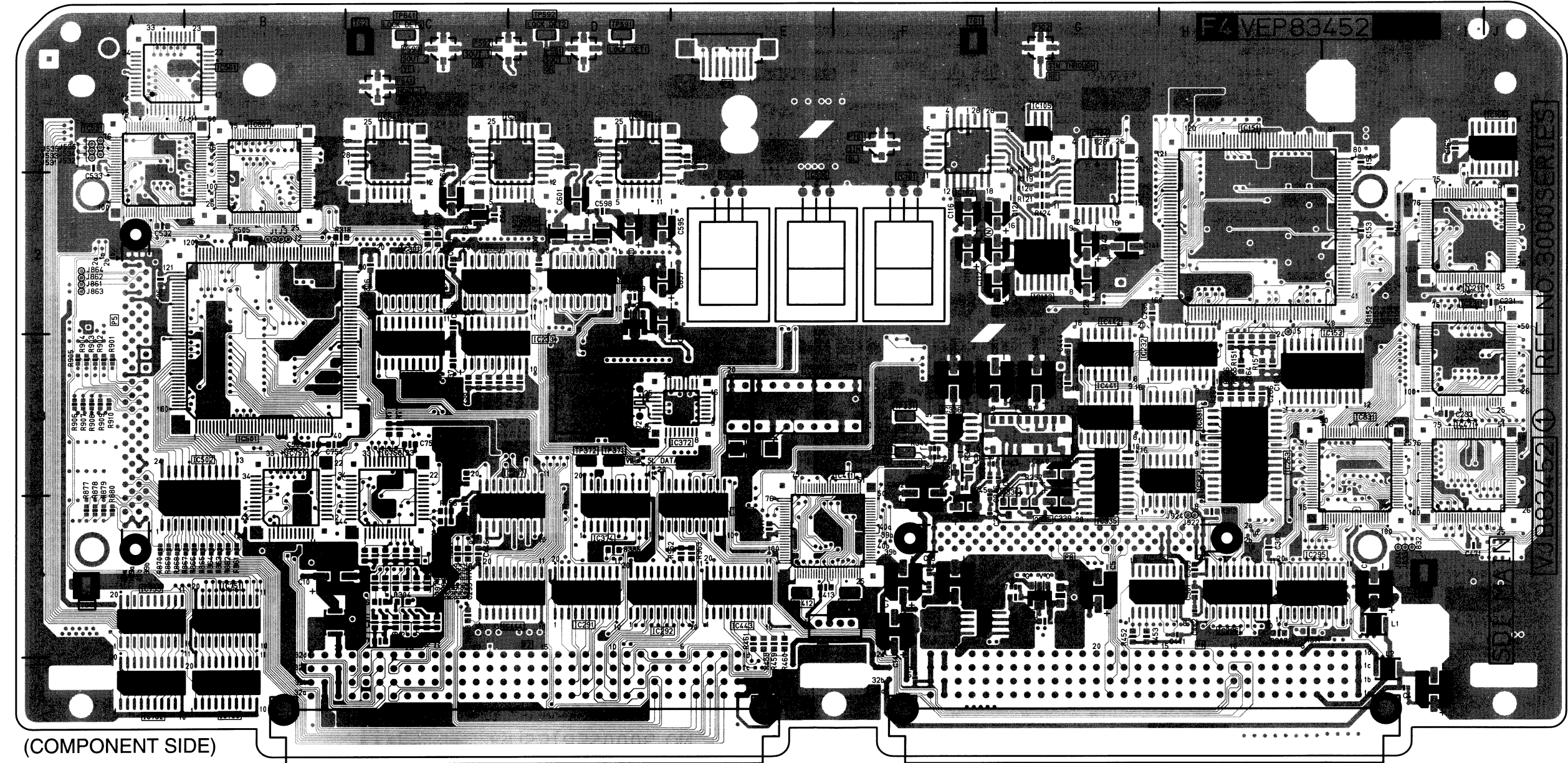


(FOIL SIDE)

F4: SDI MAIN P.C. BOARD (VEP83452A)

REF	LOC
IC1	E1
IC298	C4
IC503	C3
IC532	A2
IC534	B2
IC593	D2
IC594	D2
IC595	D2
IC642	C2
IC754	A5
IC756	B5
IC760	B4
QR751	B4

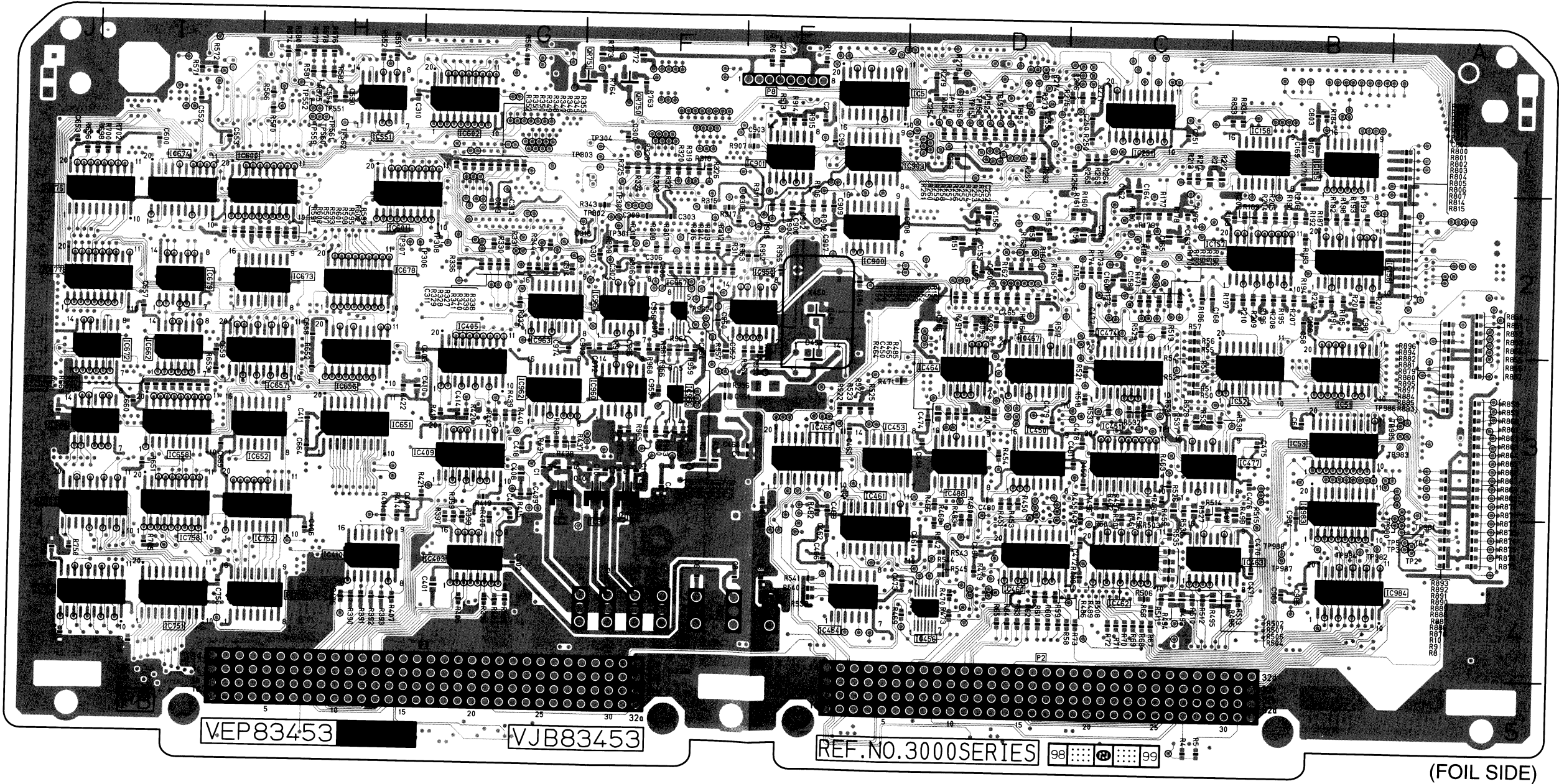
(COMPONENT SIDE)



F5: PB P.C. BOARD (VEP83453A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC2	G3	IC409	G3	IC600	I2	IC677	I2	QR750	F1
IC3	F3	IC450	D3	IC601	H2	IC678	H2	QR751	F1
IC4	F3	IC451	C3	IC602	G1	IC679	I2		
IC5	E1	IC453	E3	IC651	H3	IC750	I4		
IC51	B3	IC460	D4	IC652	I3	IC751	I4		
IC52	B3	IC461	E4	IC656	H3	IC752	I4		
IC53	B3	IC462	C4	IC657	I3	IC753	I4		
IC155	B1	IC463	C4	IC658	I3	IC754	I4		
IC156	B2	IC466	E3	IC660	I3	IC758	I4		
IC157	B2	IC467	D3	IC662	I3	IC900	E2		
IC158	B1	IC474	C3	IC672	I3	IC901	E1		
IC251	C1	IC477	C3	IC673	I2	IC903	E1		
IC403	G4	IC488	D3	IC674	I2	IC983	B3		
IC405	G3	IC551	H1	IC676	I2	IC984	B4		

(FOIL SIDE)



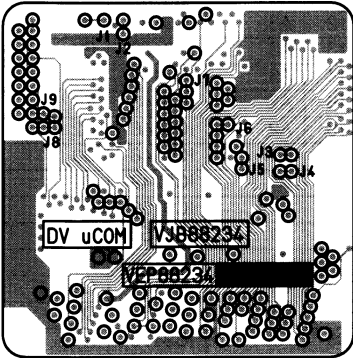
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F5: PB P.C. BOARD (VEP83453A)

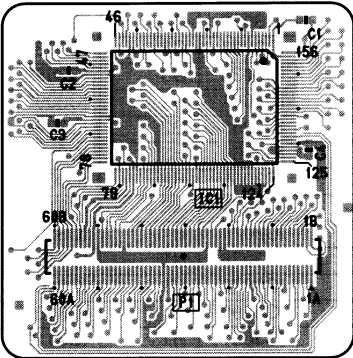
REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	F3	IC404	G4	P8	F1	TP750	F1
IC50	B3	IC455	E3	P550	I1	TP751	F1
IC54	B3	IC458	E4	P850	A3	TP900	E1
IC55	C4	IC666	I3	TG50	B4	X450	E2
IC100	D3	IC667	I3	TG250	E1		
IC101	C3	IC755	I4	TG401	G2		
IC150	D2	IC756	I4	TP154	E1		
IC154	C2	IC800	B1	TP305	F1		
IC252	C1	IC902	E1	TP400	G4		
IC253	D1	IC980	B4	TP450	E4		
IC300	F1	IC981	B3	TP451	E4		
IC301	F2	IC982	B4	TP452	E4		
IC302	G1	P1	G5	TP453	E3		
IC303	G2	P2	D5	TP454	E3		

(COMPONENT SIDE)

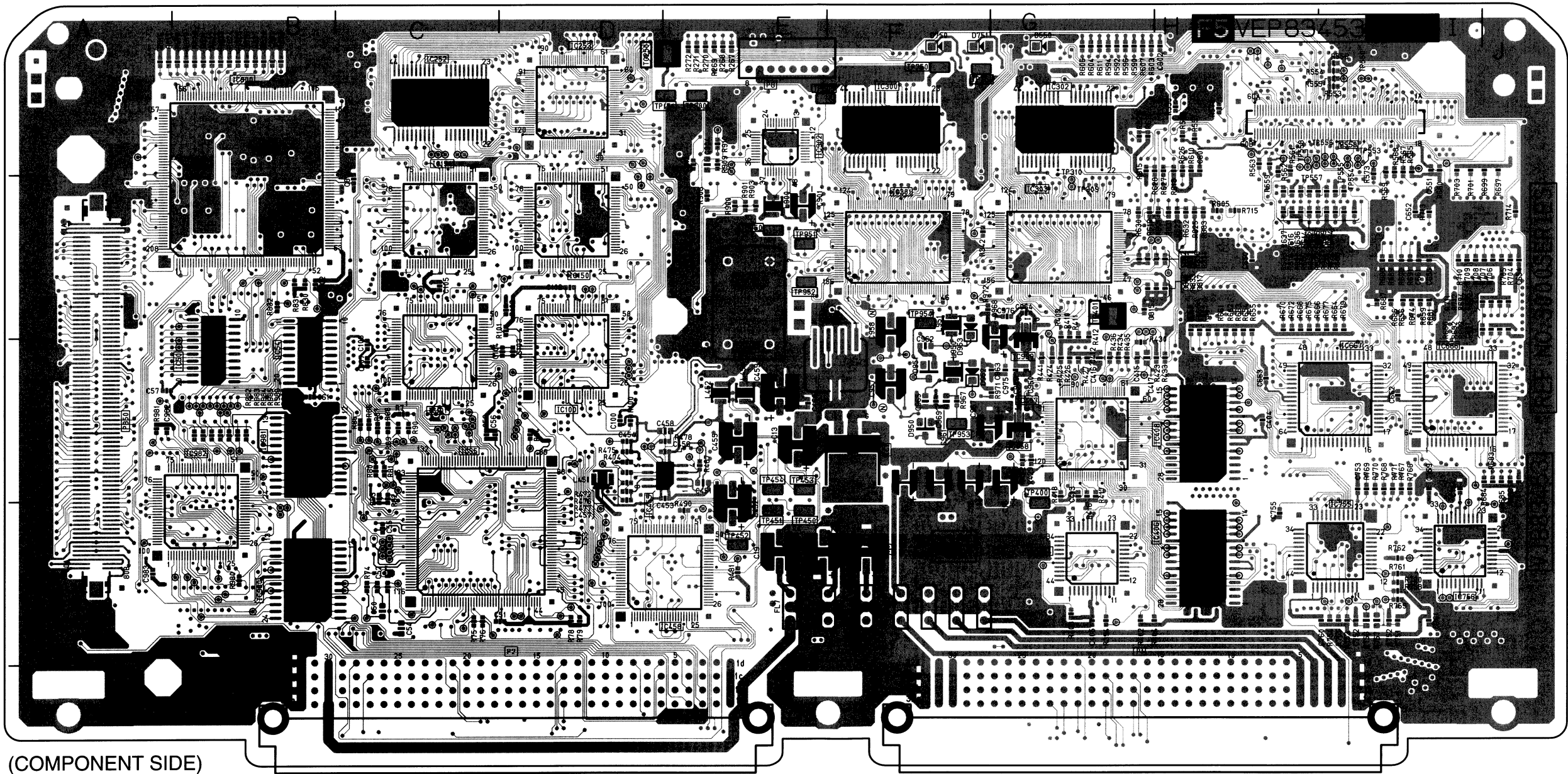
DV UCOM P.C. BOARD (VEP88234L)



(FOIL SIDE)



(COMPONENT SIDE)

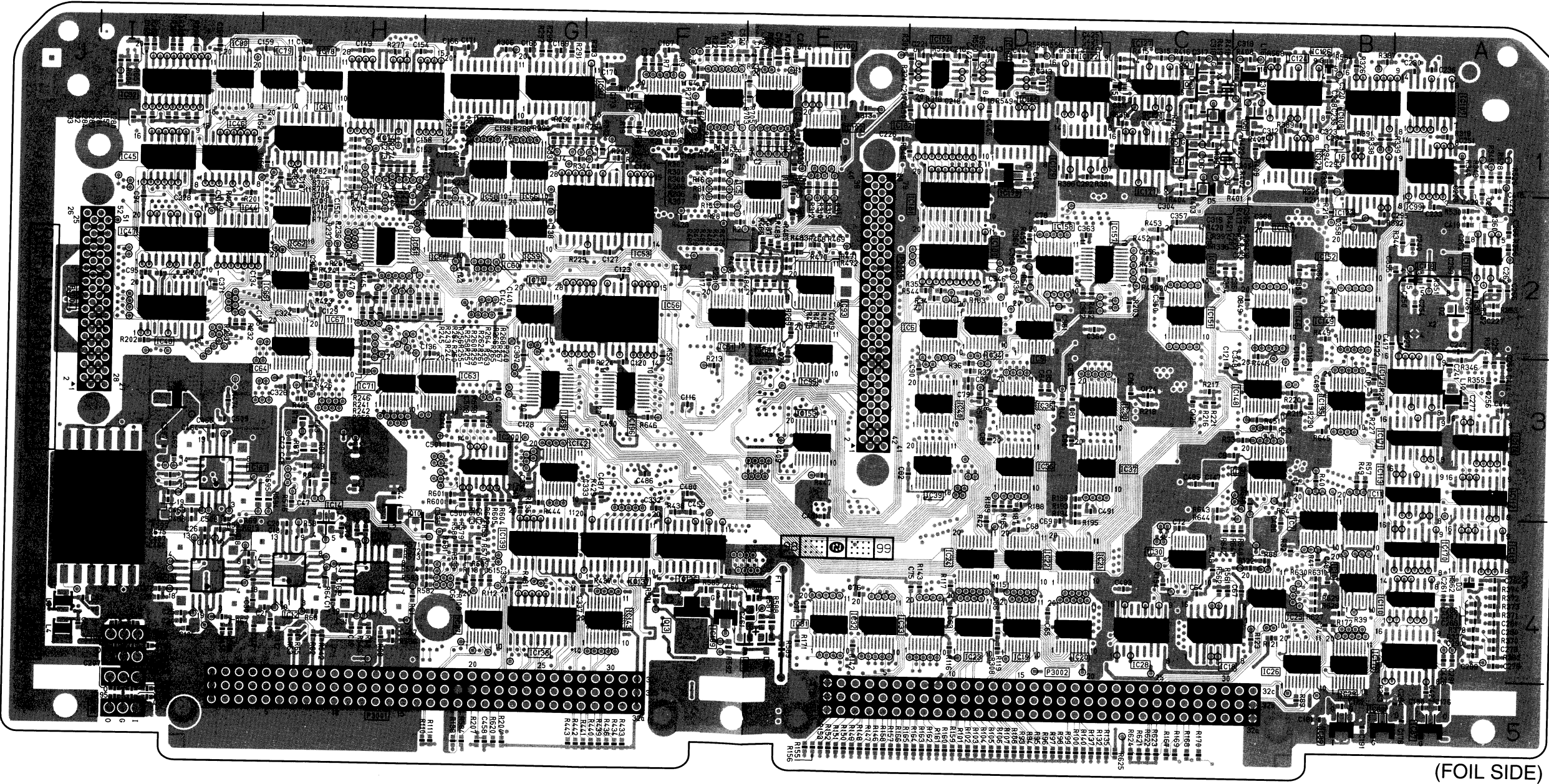


(COMPONENT SIDE)

F6: V OUT P.C. BOARD (VEP83454B)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3002	F1	IC3018	C4	IC3035	D3	IC3082	I1	IC3111	A4	IC3137	F4	IC3171	A3	Q3004	C1
IC3003	E1	IC3019	D4	IC3036	D3	IC3087	A5	IC3112	A3	IC3138	G4	IC3172	A3	Q3005	C1
IC3004	F1	IC3020	C4	IC3037	C3	IC3088	B5	IC3113	A3	IC3139	G4	IC3177	C1	Q3006	B1
IC3005	E2	IC3021	C4	IC3038	C3	IC3089	B5	IC3114	A3	IC3142	G3	IC3178	A4	Q3007	C1
IC3006	D2	IC3022	D4	IC3061	H2	IC3093	E2	IC3116	A2	IC3143	F4	IC3179	D1	Q3008	C1
IC3007	B4	IC3025	B4	IC3063	G3	IC3094	E2	IC3118	A2	IC3146	B2	IC3180	D2	Q3010	G4
IC3008	B3	IC3026	B4	IC3064	H3	IC3095	E3	IC3120	C1	IC3148	B3	IC3181	D2	Q3011	E4
IC3009	D2	IC3027	G4	IC3065	H2	IC3099	A1	IC3121	B1	IC3149	B2	IC3182	D1	Q3013	F4
IC3010	B4	IC3028	C4	IC3071	H3	IC3100	E1	IC3122	C1	IC3150	B2	IC3184	D1		
IC3011	B4	IC3029	B4	IC3074	H1	IC3102	E1	IC3124	B1	IC3152	B2	IC3185	D1		
IC3012	H4	IC3030	C4	IC3078	H1	IC3104	D1	IC3126	B1	IC3153	E3	IC3187	I3		
IC3013	I4	IC3031	E4	IC3079	H1	IC3107	A1	IC3127	C1	IC3157	C2	IC3195	B3		
IC3014	H4	IC3032	E4	IC3080	I1	IC3108	B1	IC3129	C1	IC3158	D2	IC3199	F4		
IC3015	H4	IC3034	D2	IC3081	H1	IC3110	A4	IC3136	F4	IC3170	A4	IC3200	G3		

(FOIL SIDE)

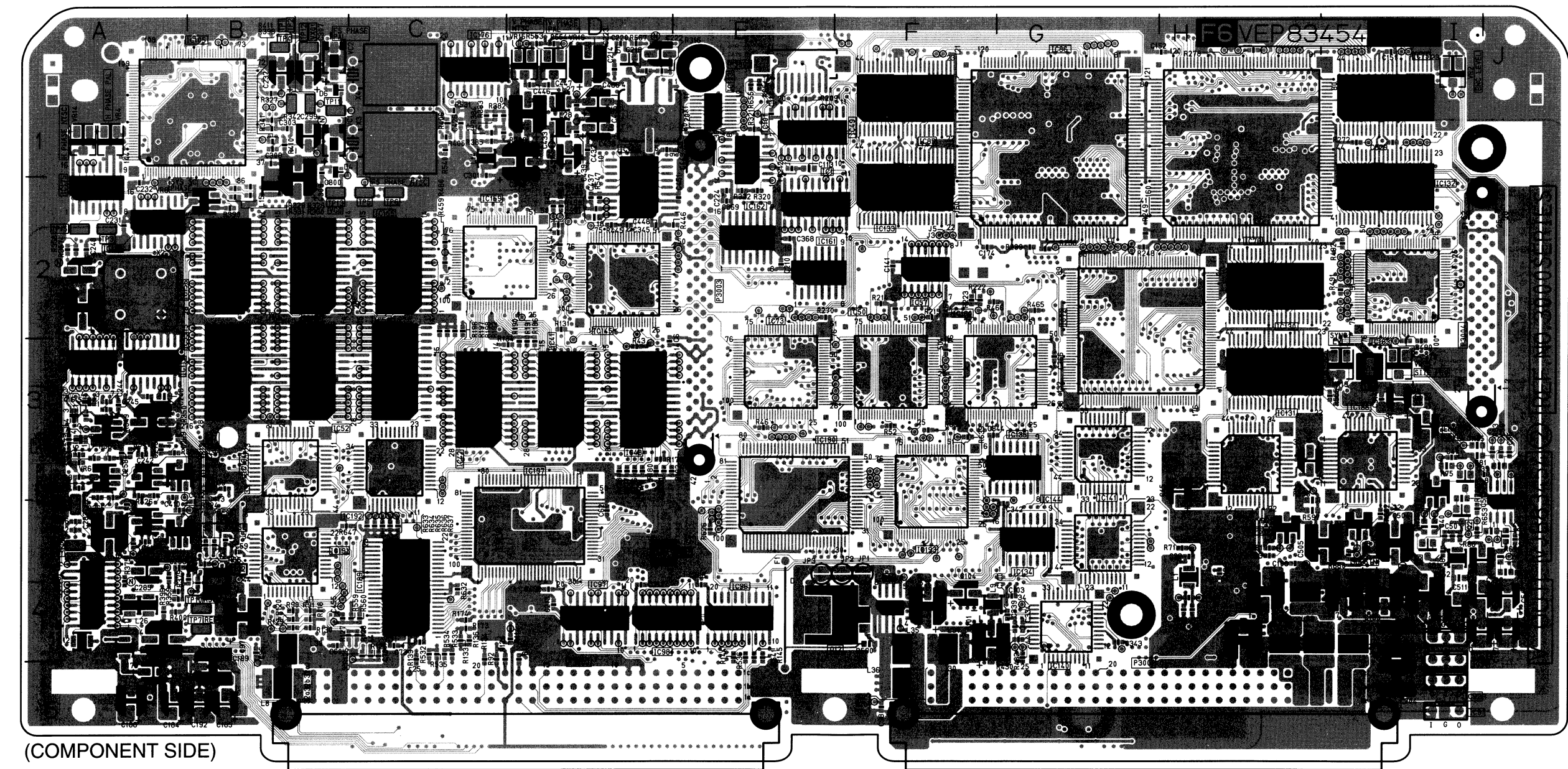


(FOIL SIDE)

F6: V OUT P.C. BOARD (VEP83454B)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3001	E2	IC3092	I5	IC3134	G4	IC3174	A3	P3002	D5	TP3004	B1	VR3002	I1	VR3025	I3
IC3016	J4	IC3096	E4	IC3135	G3	IC3175	A2	P3003	E2	TP3005	C2	VR3004	A1	X3001	E1
IC3017	H3	IC3098	E4	IC3140	G4	IC3176	C1	P3004	I2	TP3006	C2	VR3005	A3	X3002	A2
IC3041	D3	IC3101	E1	IC3141	G3	IC3183	E2	P3005	E1	TP3007	B4	VR3006	A3	X3003	C1
IC3042	C3	IC3103	E1	IC3144	G4	IC3186	I3	Q3001	I3	TP3008	A4	VR3007	A3	X3004	C1
IC3049	E1	IC3105	B1	IC3145	E2	IC3189	C4	Q3002	I4	TP3009	A4	VR3011	A4		
IC3050	F3	IC3106	A2	IC3154	B2	IC3190	E3	Q3003	I4	TP3010	B4	VR3012	A4		
IC3057	F2	IC3109	A4	IC3156	B2	IC3191	B4	Q3014	F4	TP3011	B1	VR3013	A3		
IC3072	G2	IC3115	A3	IC3159	C2	IC3192	C3	TG3001	E4	TP3012	B1	VR3014	A1		
IC3073	E3	IC3117	A3	IC3160	F3	IC3193	F3	TG3002	B4	TP3013	B2	VR3015	D1		
IC3075	I1	IC3119	A3	IC3161	E2	IC3194	B3	TG3003	I3	TP3015	A2	VR3016	D1		
IC3076	H1	IC3130	H2	IC3162	E2	IC3197	D4	TP3001	B1	VC3001	B1	VR3019	I3		
IC3090	I4	IC3131	H3	IC3163	I2	IC3201	I4	TP3002	B1	VC3002	B1	VR3020	I4		
IC3091	I5	IC3132	I2	IC3173	A3	P3001	G5	TP3003	A2	VR3001	I3	VR3021	H4		

(COMPONENT SIDE)

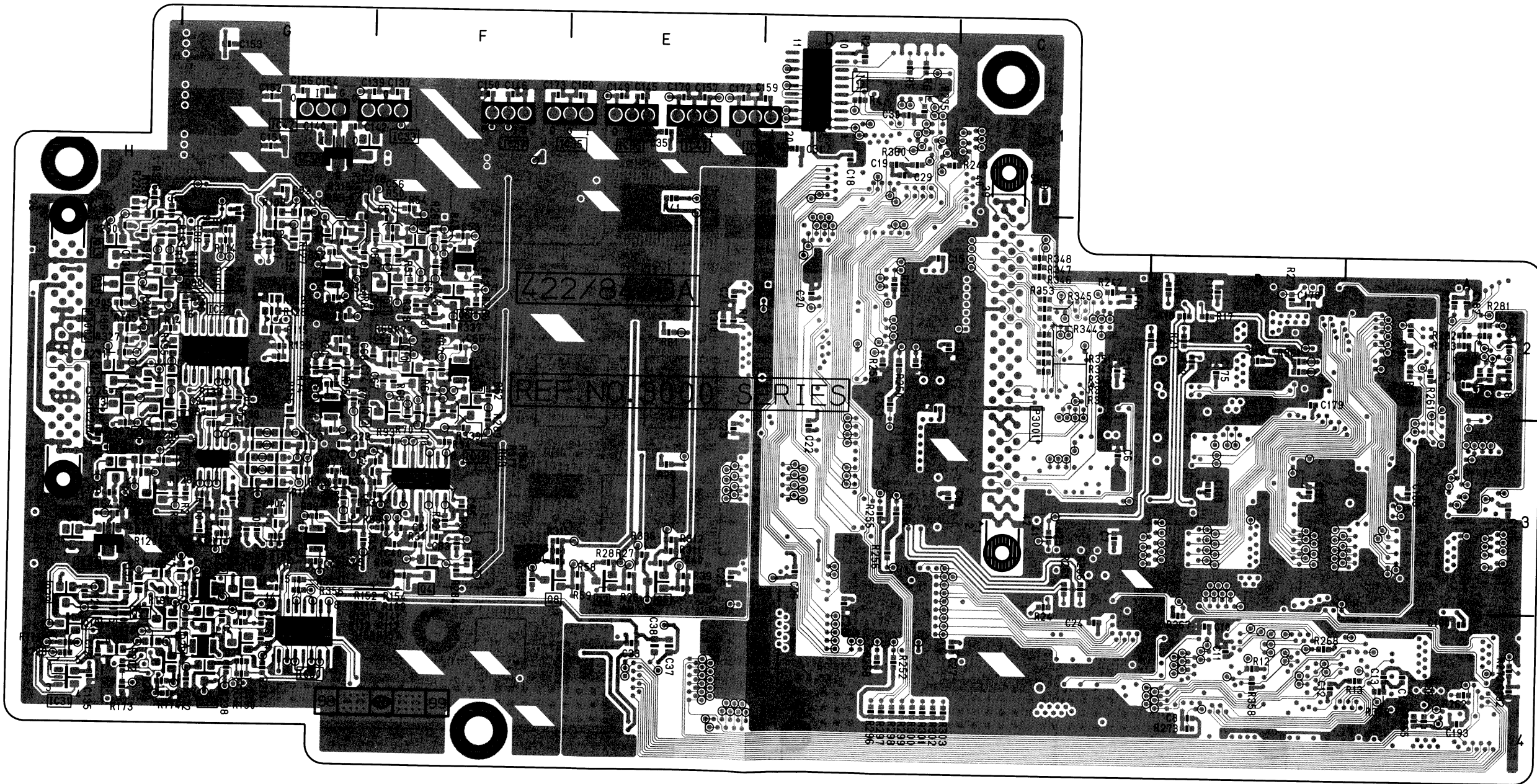


(COMPONENT SIDE)

4:2:2 DA SUB P.C. BOARD (VEP83385B)

REF	LOC	REF	LOC	REF	LOC
IC3001	D1	Q3004	F3	Q3029	H4
IC3015	F3	Q3005	E3		
IC3030	G4	Q3006	F2		
IC3031	H4	Q3007	F2		
IC3033	B1	Q3008	F3		
IC3034	D1	Q3009	F3		
IC3036	D1	Q3010	F2		
IC3038	G1	Q3011	F2		
IC3039	H3	Q3012	F3		
IC3040	D1	Q3015	H3		
IC3042	B1	Q3018	H4		
P3001	C2	Q3022	G4		
P3002	H2	Q3024	H3		
Q3002	E3	Q3027	G4		

(FOIL SIDE)

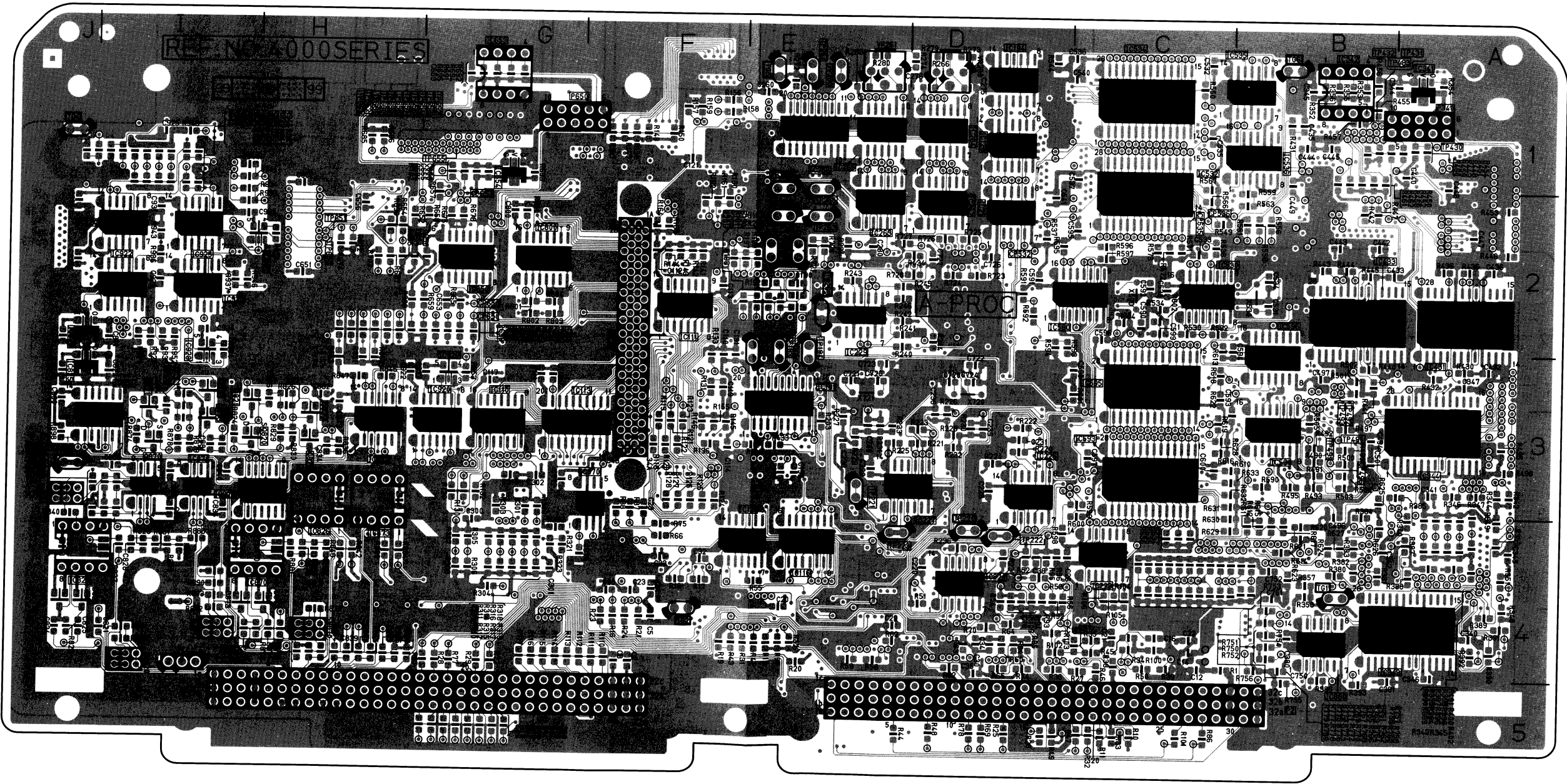


(FOIL SIDE)

F7: A PROC P.C. BOARD (VEP84326C)

REF	LOC	REF	LOC	REF	LOC
IC21	D2	IC343	A4	IC920	G3
IC110	G3	IC344	A3	IC970	F3
IC111	F2	IC530	C2		
IC113	G3	IC534	C1		
IC116	E4	IC535	B1		
IC120	D1	IC536	B1		
IC121	F4	IC590	C2		
IC191	E3	IC591	B3		
IC194	D1	IC595	C3		
IC220	D4	IC596	B2		
IC226	D3	IC654	G1		
IC227	E3	IC820	H3		
IC229	E2	IC822	H3		
IC341	A1	IC874	I3		

(COMPONENT SIDE)

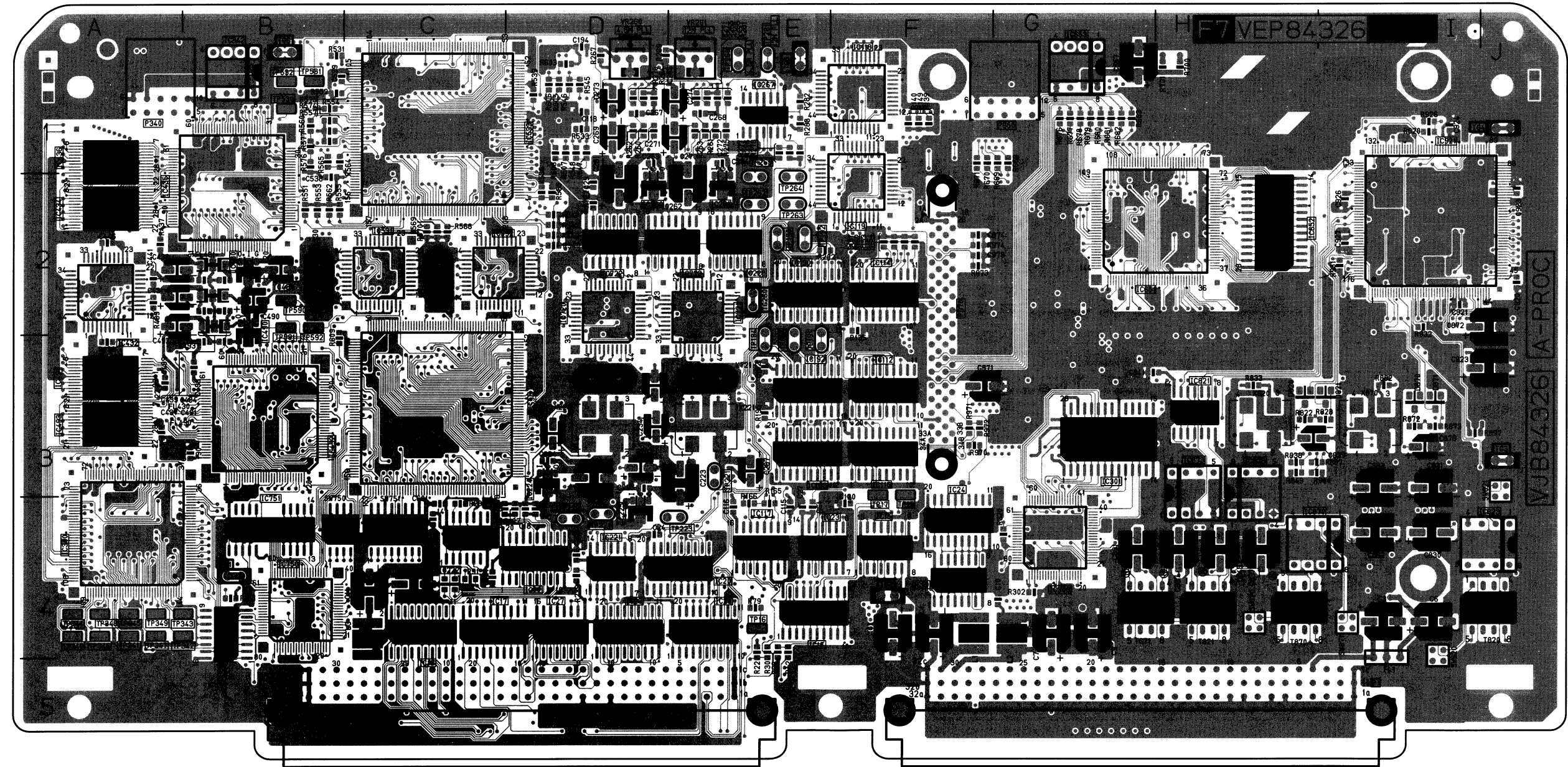


(FOIL SIDE)

F7: A PROC P.C. BOARD (VEP84326C)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC15	F4	IC117	E4	IC436	A1	IC873	H4	TG260	E2	TP345	A4
IC16	F4	IC118	F1	IC490	B2	IC921	I2	TP190	E2	TP346	A4
IC17	C4	IC119	F2	IC491	A3	IS342	B1	TP191	F2	TP347	A4
IC18	C4	IC190	E2	IC492	B3	IS653	G1	TP193	E2	TP348	A4
IC19	F4	IC192	E3	IC493	A3	P1	G5	TP194	E2	TP349	A4
IC20	E4	IC193	E3	IC531	C2	P2	D5	TP220	D4	X220	D3
IC22	D4	IC221	D4	IC533	C1	T821	H4	TP221	E3	X221	E3
IC23	F4	IC224	D3	IC592	C2	T871	G4	TP222	D4	X530	B2
IC25	E4	IC225	D4	IC594	C3	TG1	B4	TP223	E4	X590	C2
IC26	D4	IC340	A4	IC651	H2	TG2	F4	TP340	A4		
IC27	D4	IC342	B1	IC652	H2	TG3	J3	TP341	A4		
IC112	F3	IC430	B2	IC653	G1	TG4	J1	TP342	A4		
IC114	F2	IC434	A2	IC821	H3	TG5	E1	TP343	A4		
IC115	F3	IC435	B2	IC826	H4	TG6	B1	TP344	A4		

(COMPONENT SIDE)

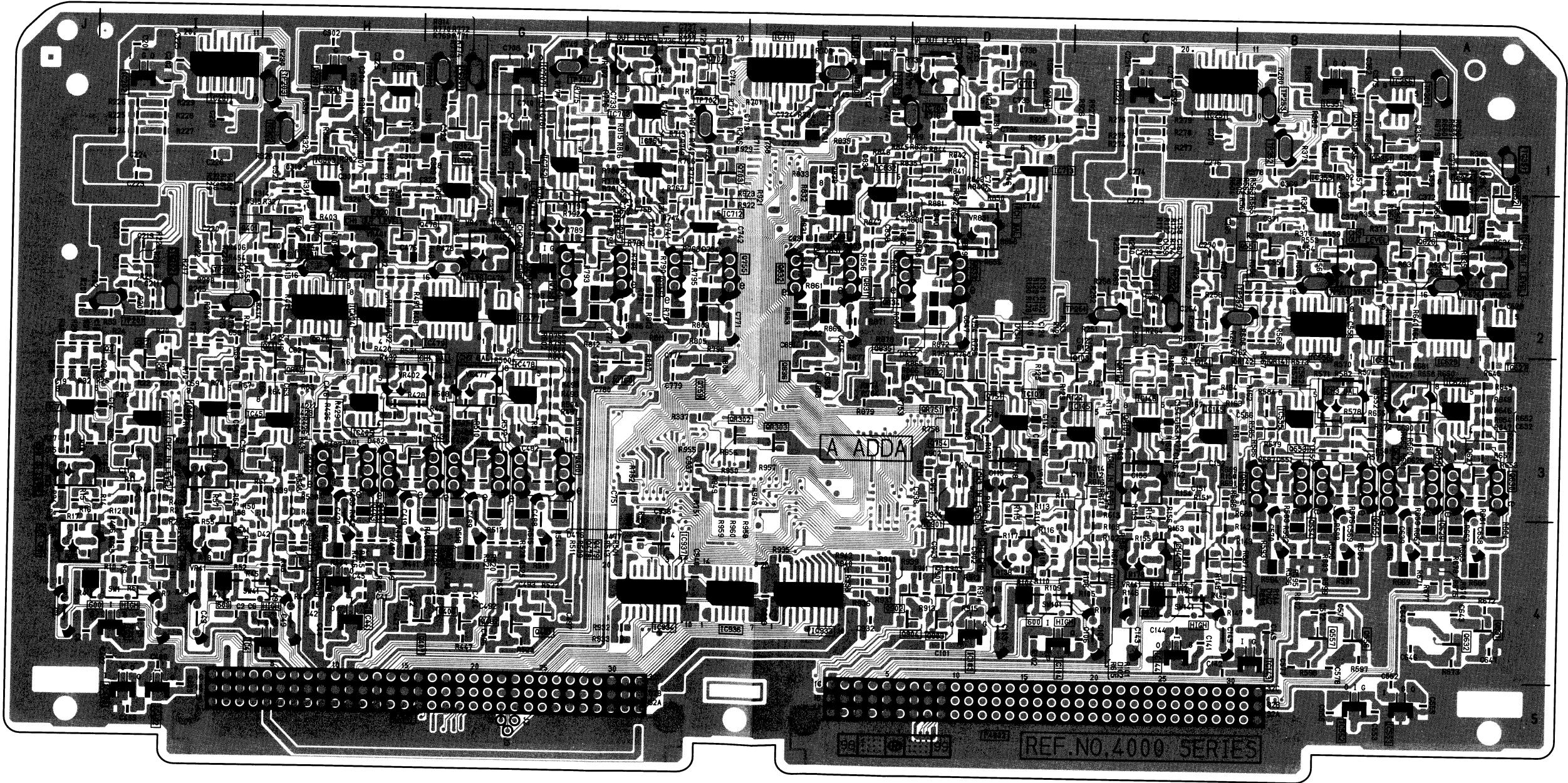


(COMPONENT SIDE)

F8: A ADDA P.C. BOARD (VEP84301C)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4003	I4	IC4304	G2	IC4552	B5	IC4710	G2	Q4302	G1	Q4632	A4	Q4903	D4
IC4004	H4	IC4306	H1	IC4553	A5	IC4711	E1	Q4351	B1	Q4701	D1	Q4904	D4
IC4043	H4	IC4351	B1	IC4554	B2	IC4712	F2	Q4352	A2	Q4702	F1	QR4301	H1
IC4044	H4	IC4353	B2	IC4555	B3	IC4713	D1	Q4401	H2	Q4703	F1	QR4302	F3
IC4103	D4	IC4354	A2	IC4556	B2	IC4751	F1	Q4406	G4	Q4704	D1	QR4303	E3
IC4104	D4	IC4356	B1	IC4627	A2	IC4752	G1	Q4407	G4	Q4751	D3	QR4351	B1
IC4143	B4	IC4402	I5	IC4628	A3	IC4831	E2	Q4476	H2	Q4752	D3	QR4751	D3
IC4144	C4	IC4403	I5	IC4629	A2	IC4832	E2	Q4481	G4	Q4754	D3		
IC4201	I1	IC4404	H2	IC4701	E1	IC4901	D4	Q4482	G4	Q4759	F3		
IC4202	I1	IC4405	H3	IC4703	F1	IC4933	E4	Q4551	B2	Q4760	F3		
IC4251	C1	IC4406	H2	IC4704	D1	IC4934	F4	Q4556	B4	Q4835	E3		
IC4252	C1	IC4477	G2	IC4707	G1	IC4936	F4	Q4557	B4	Q4836	E3		
IC4301	H1	IC4478	G3	IC4708	G1	IC4937	F4	Q4626	B2	Q4901	D4		
IC4303	H2	IC4479	G2	IC4709	G2	Q4301	H1	Q4631	A4	Q4902	D4		

(FOIL SIDE)

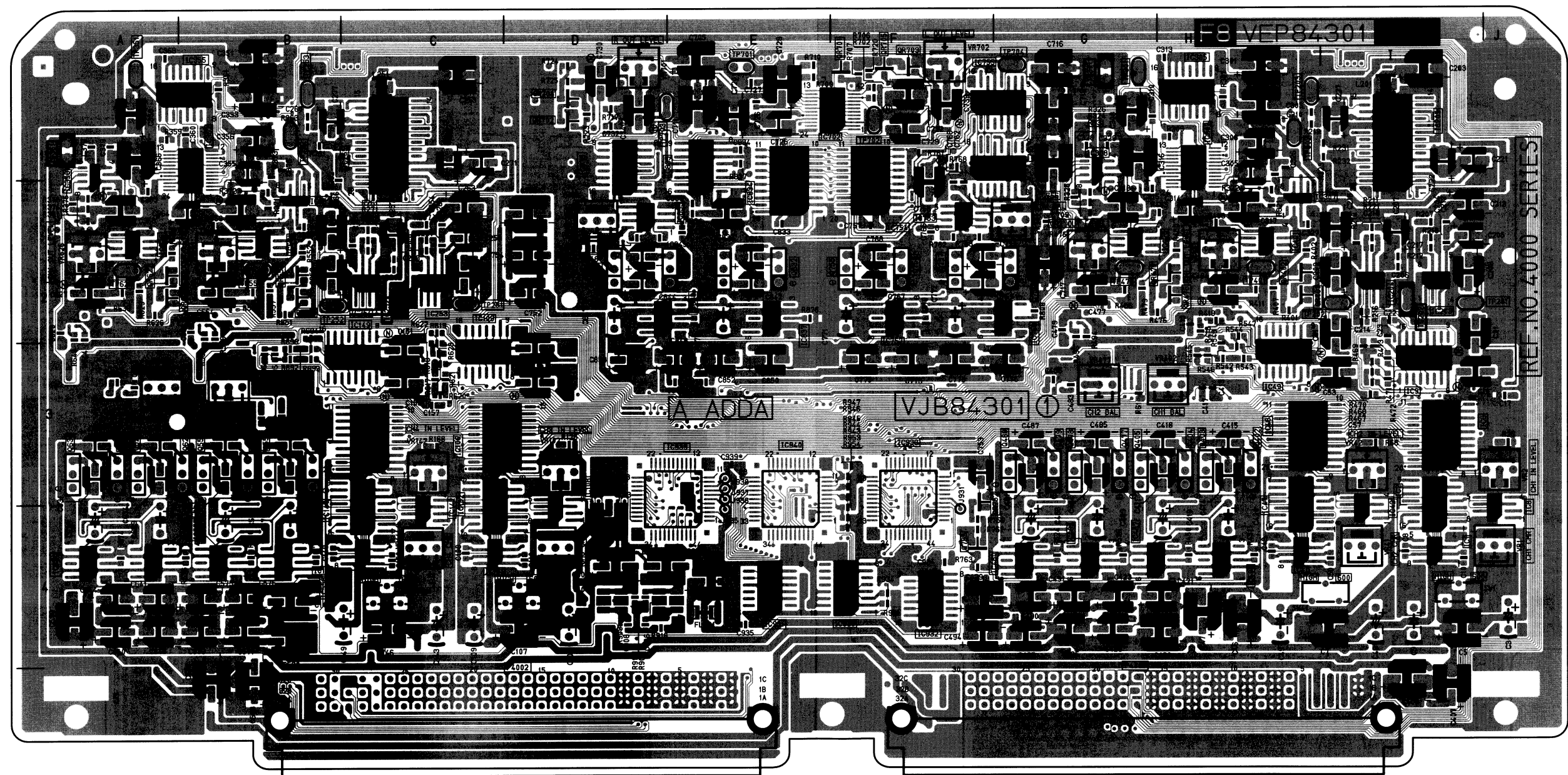


(FOIL SIDE)

F8: A ADDA P.C. BOARD (VEP84301C)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4302	H1	IC4551	B2	IC4834	E2	Q4403	H3	Q4630	A3	QR4551	B2	TP4351	A1	VR4551	B2
IC4305	H1	IC4557	B4	IC4835	E1	Q4404	H3	Q4753	F4	QR4552	B2	TP4352	B1	VR4552	B3
IC4307	I2	IC4558	B4	IC4836	D1	Q4405	G3	Q4755	F2	QR4626	A2	TP4401	H2	VR4626	A2
IC4308	G1	IC4626	A2	IC4837	E2	Q4477	G3	Q4756	F2	QR4627	A2	TP4476	G2	VR4627	A3
IC4352	B1	IC4630	A4	IC4838	D2	Q4478	G3	Q4757	F2	QR4701	F1	TP4551	B2	VR4701	D1
IC4355	A1	IC4631	A4	IC4931	E4	Q4479	G3	Q4758	G2	QR4702	D1	TP4626	A2	VR4702	F1
IC4357	B2	IC4702	F1	IC4932	F4	Q4480	G3	Q4831	E2	QR4703	F1	TP4701	E1	VR4751	G2
IC4358	A1	IC4753	F2	IC4935	F4	Q4552	B3	Q4832	E2	QR4704	D1	TP4702	F1	VR4831	D2
IC4401	H2	IC4754	F2	IC4938	F3	Q4553	B3	Q4833	D2	QR4705	F1	TP4703	D1		
IC4407	G4	IC4755	G1	IC4939	E3	Q4554	B3	Q4834	E2	QR4752	F3	TP4704	G1		
IC4408	H4	IC4756	G1	IC4940	E3	Q4555	B3	QR4401	I2	TG4301	G1	VR4401	H2		
IC4476	G2	IC4757	F2	P4001	G5	Q4627	A3	QR4402	I2	TG4351	A1	VR4402	G3		
IC4480	G4	IC4758	G2	P4002	D5	Q4628	A3	QR4476	H2	TP4301	G1	VR4476	G2		
IC4481	G4	IC4833	D2	Q4402	H3	Q4629	A3	QR4477	H2	TP4302	I1	VR4477	G3		

(COMPONENT SIDE)



(COMPONENT SIDE)

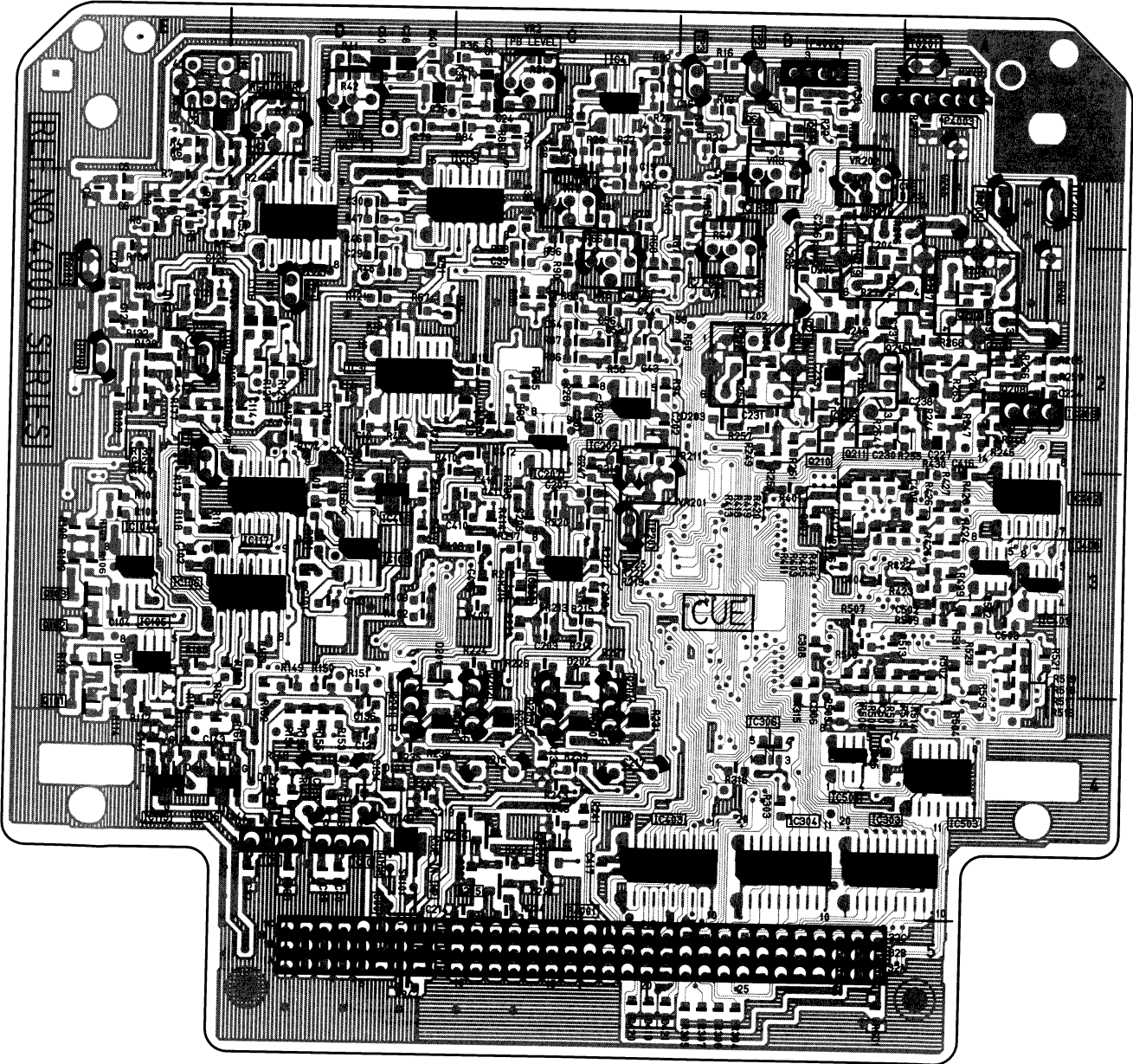
H1: CUE P.C. BOARD (VEP84302B)

REF	LOC	REF	LOC
IC4003	D2	IC4401	A3
IC4004	C1	IC4402	A3
IC4013	C1	IC4403	B4
IC4103	D3	IC4406	D3
IC4106	D3	IC4408	A3
IC4115	E4	Q4003	B1
IC4116	D4	Q4205	C4
IC4117	D3	Q4206	C4
IC4202	C2	QR4201	C4
IC4203	C3		
IC4207	C2		
IC4303	A4		
IC4304	B4		
IC4306	B4		

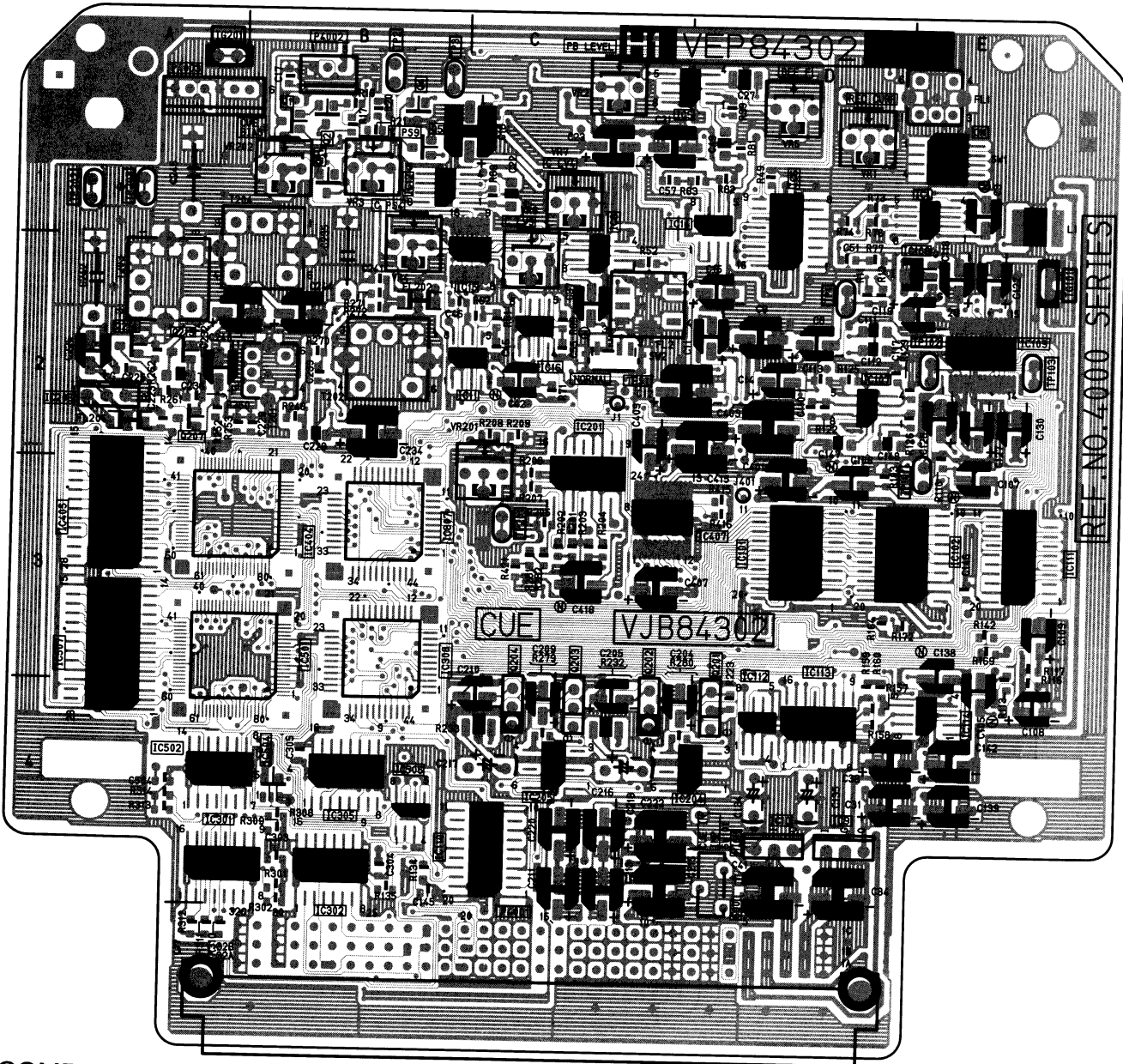
(FOIL SIDE)

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4005	C1	IC4201	C2	Q4002	B1	VR4003	B1
IC4006	D1	IC4204	D4	Q4201	D4	VR4005	D1
IC4008	C2	IC4205	C4	Q4202	C4	VR4006	C2
IC4009	D4	IC4301	B4	Q4203	C4		
IC4010	D4	IC4302	B4	Q4204	C4		
IC4011	C2	IC4305	B4	QR4001	B1		
IC4012	B1	IC4307	B3	SW4002	C2		
IC4014	D1	IC4308	B3	TG4101	E2		
IC4015	C1	IC4404	B3	TP4001	D2		
IC4101	D3	IC4405	A3	TP4101	E2		
IC4108	E2	IC4407	C3	TP4102	E2		
IC4109	E2	P4001	C5	TP4103	E2		
IC4110	C4	P4002	B1	TP4201	C3		
IC4111	E3	Q4001	B1	VR4002	C1		

(COMPONENT SIDE)



(FOIL SIDE)



(COMPONENT SIDE)

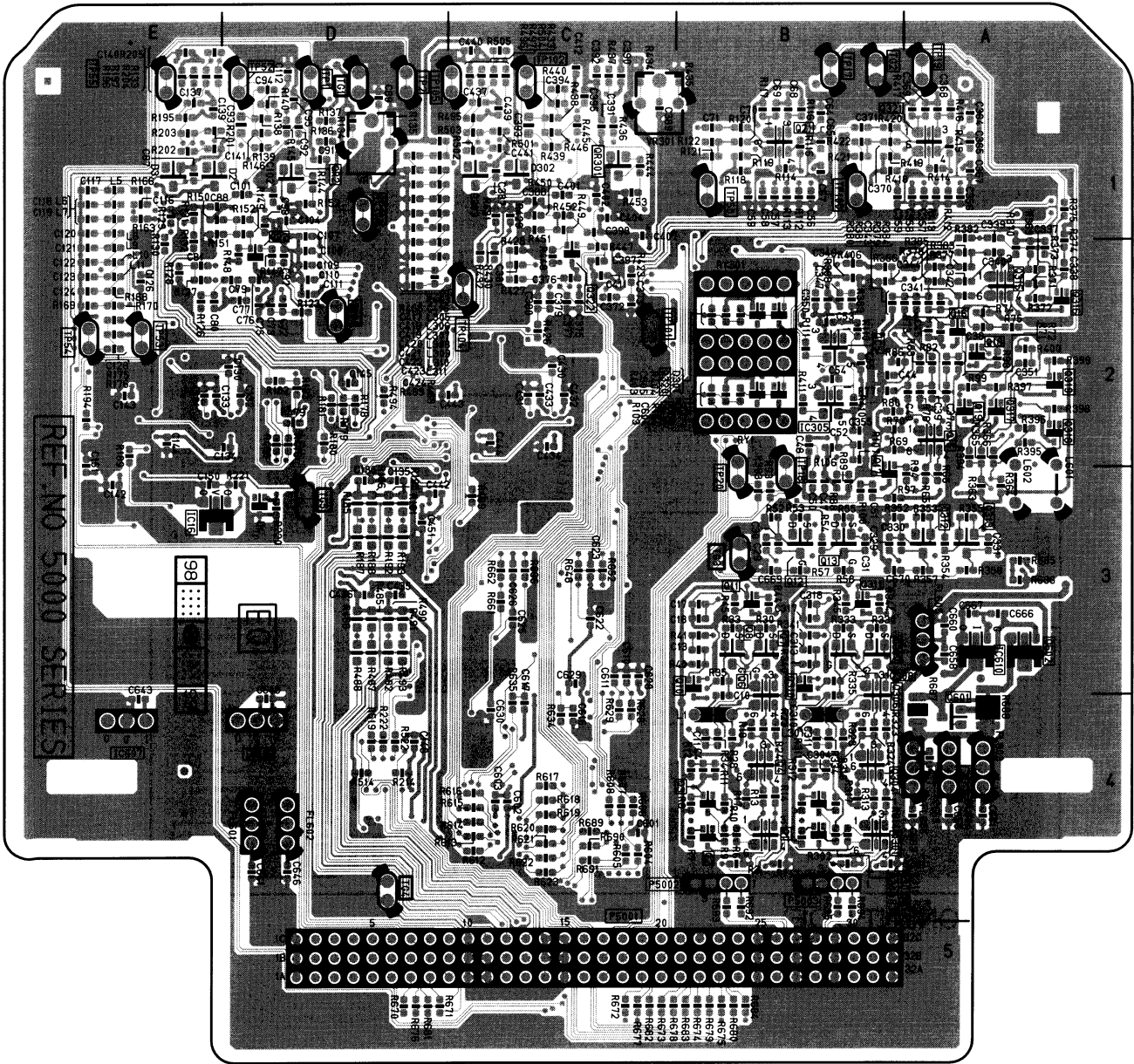
H2/H3/H4: EQ P.C. BOARD (VEP85177A)

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC5005	B2	Q5013	B3	Q5307	B3	Q5601	A4
IC5016	E3	Q5015	B2	Q5308	B3	Q5602	A3
IC5305	B2	Q5016	A2	Q5310	B4		
IC5610	A3	Q5017	B3	Q5311	B3		
Q5001	B4	Q5018	A2	Q5312	B3		
Q5002	B4	Q5019	A2	Q5313	A3		
Q5003	B4	Q5020	B2	Q5315	A2		
Q5004	B4	Q5021	B1	Q5316	A2		
Q5006	B4	Q5022	D2	Q5317	A2		
Q5007	B3	Q5301	B4	Q5318	A2		
Q5008	B3	Q5302	B4	Q5319	A2		
Q5010	B4	Q5303	B4	Q5320	B2		
Q5011	B3	Q5304	B4	Q5321	B1		
Q5012	B3	Q5306	B4	Q5322	C2		

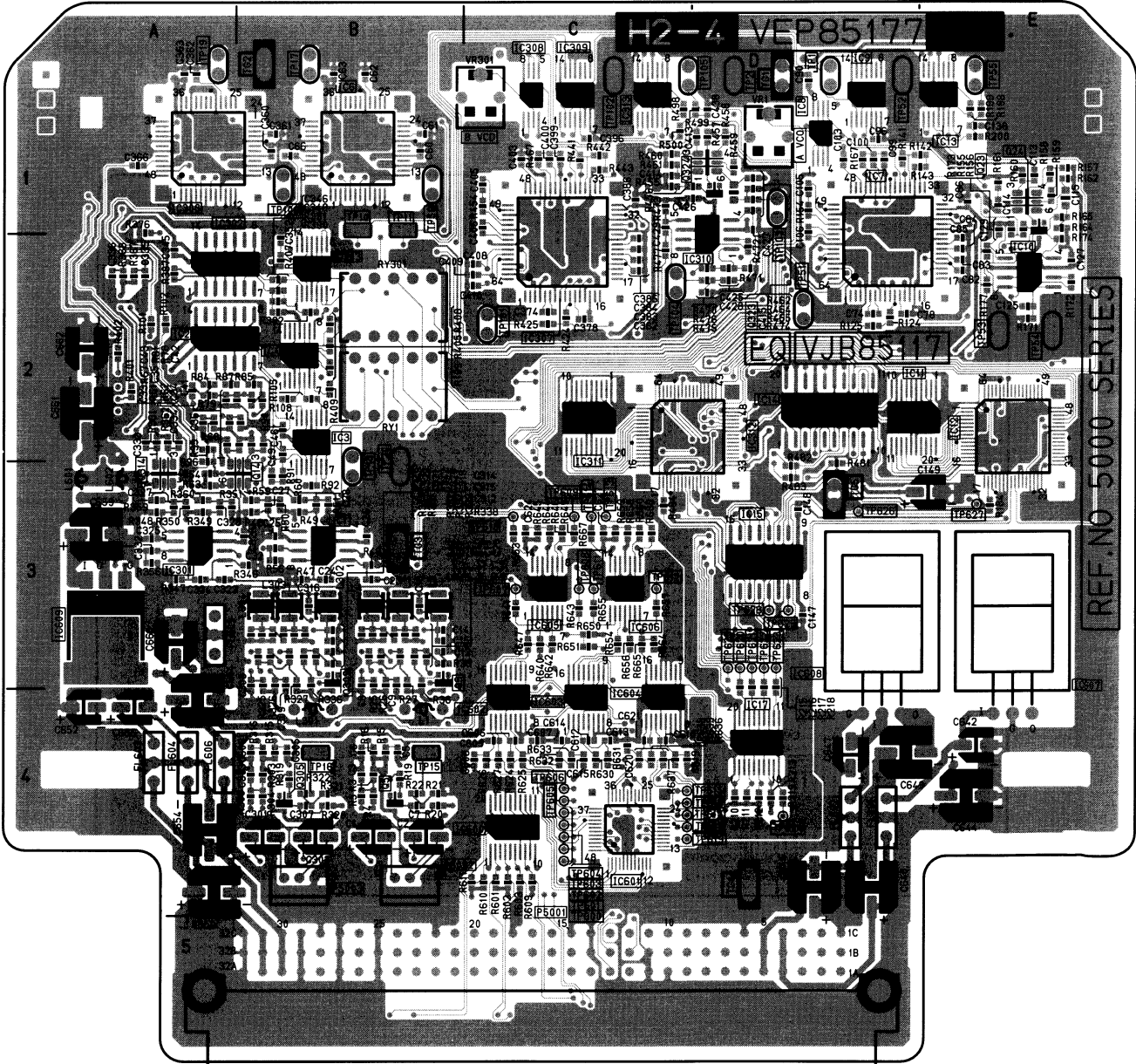
(FOIL SIDE)

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC5001	B3	IC5017	D4	IC5602	C4	Q5023	E1	TP5001	D1	TP5054	E2
IC5002	A2	IC5301	A3	IC5603	C4	Q5024	E1	TP5002	D1	TP5055	E1
IC5003	B2	IC5302	A2	IC5604	C4	Q5305	B4	TP5010	B1	TP5100	B1
IC5004	B2	IC5303	B2	IC5605	C3	Q5309	B3	TP5011	B1	TP5101	C2
IC5006	B1	IC5306	A1	IC5606	C3	Q5314	A3	TP5015	B4	TP5102	C1
IC5007	D2	IC5307	C2	IC5607	E4	Q5323	D1	TP5016	B4	TP5103	D1
IC5008	D1	IC5308	C1	IC5608	D4	Q5324	D1	TP5017	B1	TP5104	C2
IC5009	D1	IC5309	C1	IC5609	A3	RY5001	B2	TP5018	B3	TP5105	C1
IC5010	E2	IC5310	D2	P5001	C5	RY5301	B2	TP5019	A1	VR5001	D1
IC5011	D2	IC5311	C2	P5002	B4	TG5001	D1	TP5020	B3	VR5301	C1
IC5012	E2	IC5312	C2	P5003	B4	TG5002	B1	TP5050	B1		
IC5013	E1	IC5313	C1	Q5005	B4	TG5003	B3	TP5051	D2		
IC5014	D2	IC5600	C4	Q5009	B3	TG5004	D4	TP5052	D1		
IC5015	D3	IC5601	C4	Q5014	B3	TG5005	D3	TP5053	E2		

(COMPONENT SIDE)



(FOIL SIDE)



(COMPONENT SIDE)

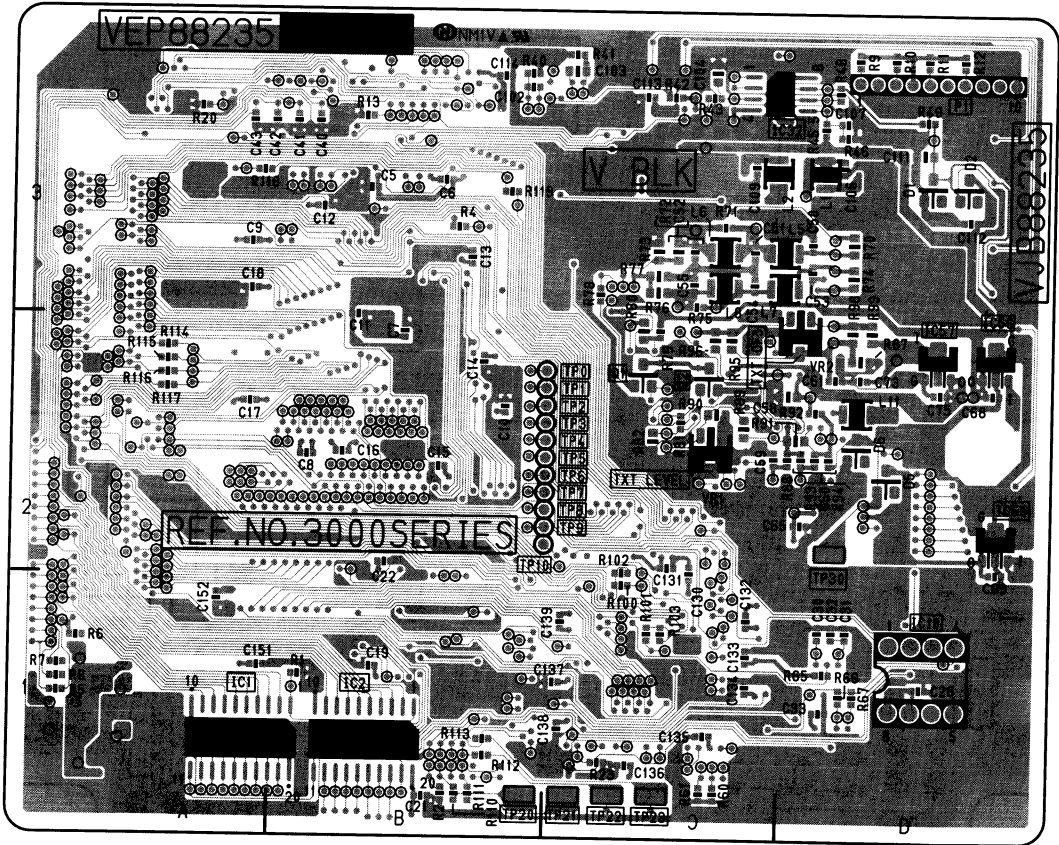
V BLK P.C. BOARD (VEP88235A)

REF	LOC	REF	LOC
IC1	A1	VR2	D2
IC2	B1		
IC32	D3		
IC55	D2		
IC56	D2		
IC57	D2		
Q1	C2		
Q2	C2		
TP20	B1		
TP21	C1		
TP22	C1		
TP23	C1		
TP30	D2		
VR1	C2		

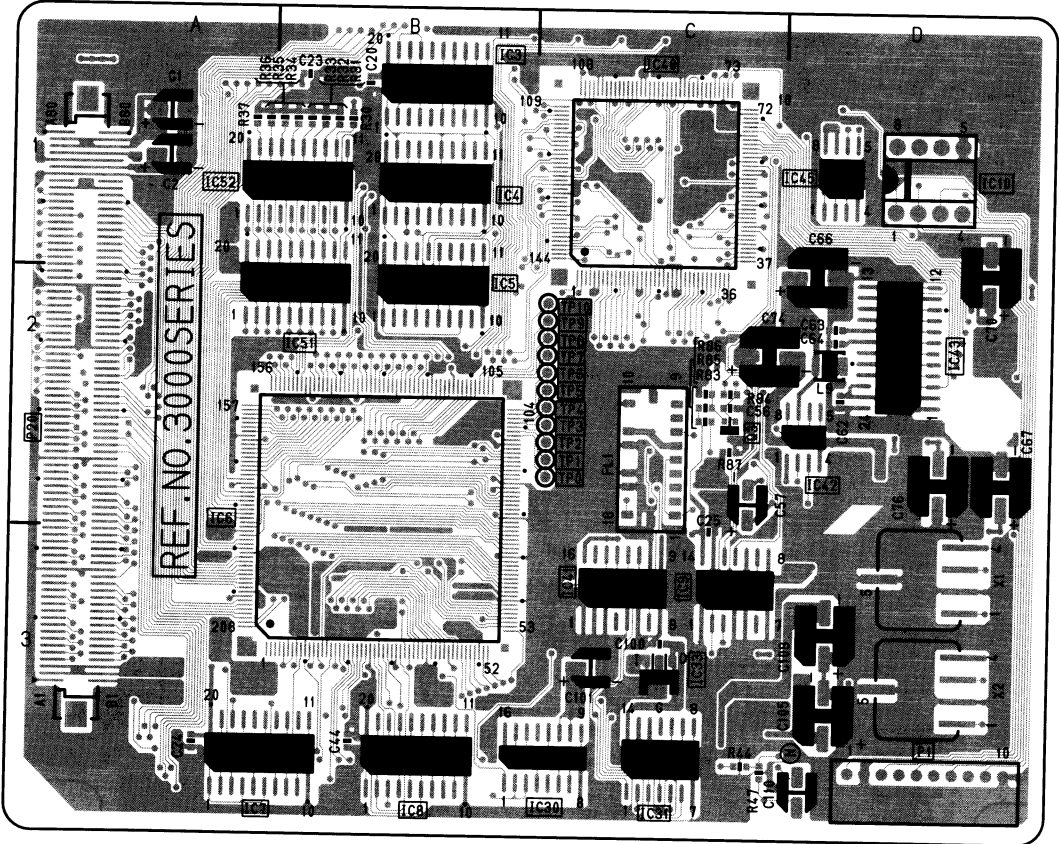
(FOIL SIDE)

REF	LOC	REF	LOC
IC3	B1	IC43	D2
IC4	B1	IC45	D1
IC5	B2	IC51	B2
IC6	B2	IC52	B1
IC7	A3	P20	A2
IC8	B3	Q3	C2
IC9	C3	X1	D3
IC10	D1	X2	D3
IC30	C3		
IC31	C3		
IC33	C3		
IC40	C1		
IC41	C3		
IC42	D2		

(COMPONENT SIDE)



(FOIL SIDE)



(COMPONENT SIDE)

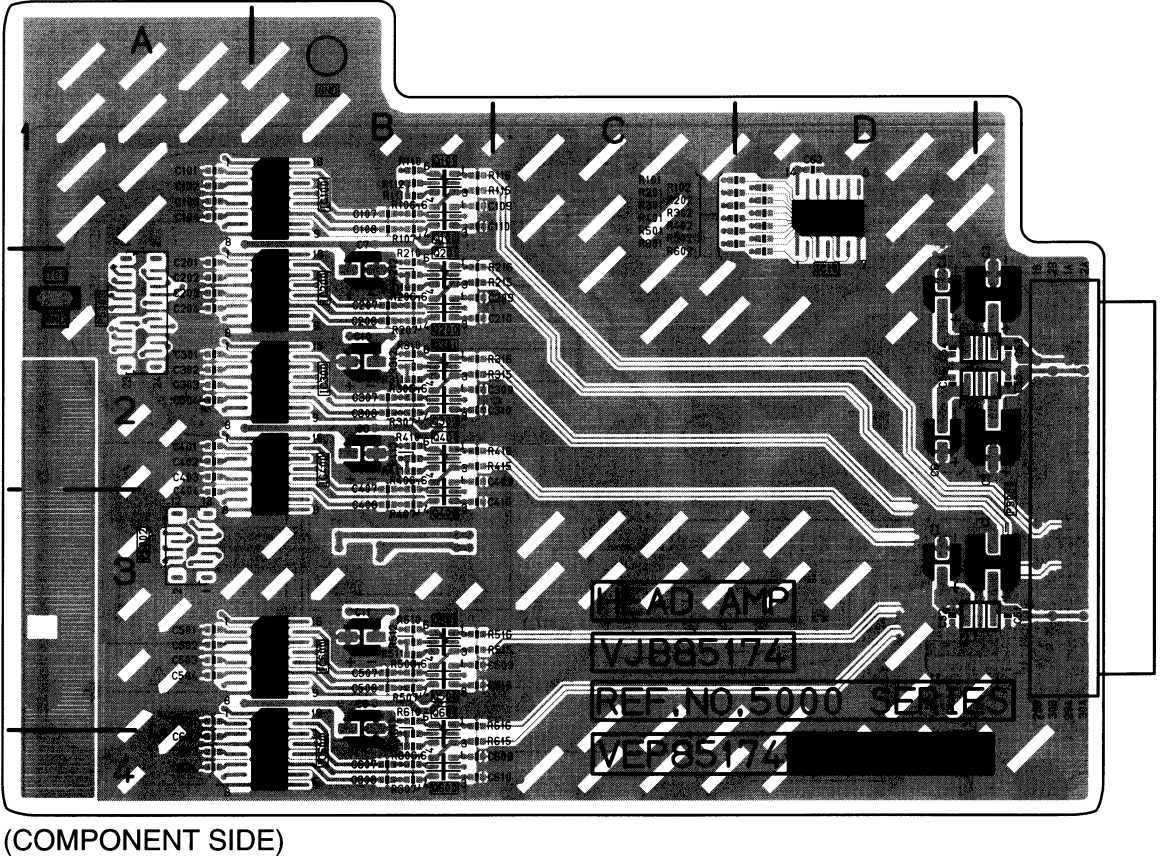
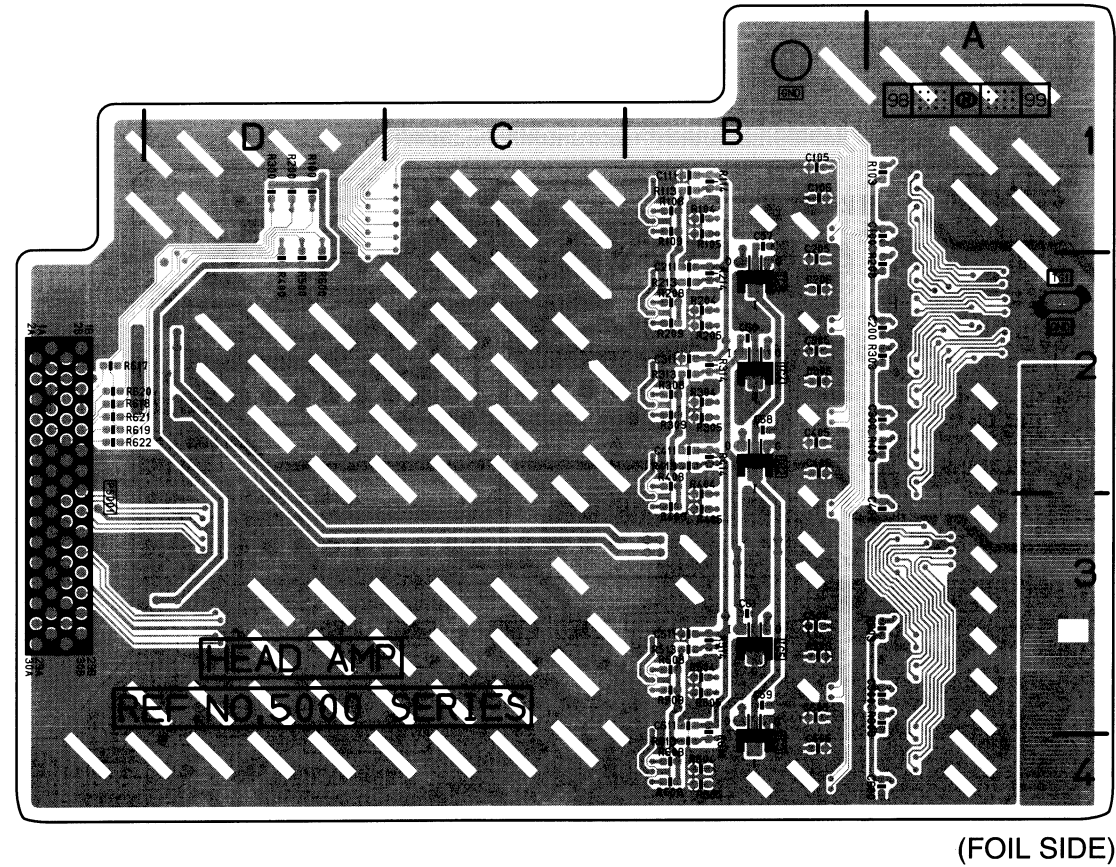
HEAD AMP P.C. BOARD (VEP85174A)

REF	LOC	REF	LOC
TG5001	A2	Q5301	B2
P5003	A2	Q5400	B2
P5002	A3	Q5401	B2
IC5100	B1	Q5500	B3
IC5200	B2	Q5501	B3
IC5300	B2	Q5600	B4
IC5400	B2	Q5601	B4
IC5500	B3	IC5010	D1
IC5600	B4	P5001	E2
Q5100	B1		
Q5101	B1		
Q5200	B2		
Q5201	B2		
Q5300	B2		

(FOIL SIDE)

REF	LOC
IC5001	B2
IC5002	B2
IC5003	B4
IC5004	B2
IC5005	B3

(COMPONENT SIDE)



POWER 1 P.C. BOARD (VEP81183A)

REF	LOC
Q1	B3
Q2	B4
Q4	C4
Q5	C5
IC1	B4
IC2	B5
IC3	C3
VR2	B5
P1	A3
P2	A2
P3	A2
P4	C4

(FOIL SIDE)

JAPAN ONLY

警告

感電注意 + 感電ややけどの可能性
があります。

AC100V の加わっている活
電部 (充電部、活電部) に
直接触れないでください。

- ① 警告 印の部品は安全上重要な部品です。
交換するときは、安全および性能維持のため必ず指定の部品をご使用
ください。
- ② 内は充電部です。 AC 100V が加わっておりますので点検、修理のときは感電
しないよう充分ご注意ください。
- ③ 部品交換時には、電源プラグをぬいてから行ってください。
- ④ 一次側 (充電部) の電圧・波形は、一次側アースを基準に測定してください。
- ⑤ 部品品番は、部品価格表で確認の上交換ください。

POWER 2 P.C. BOARD (VEP81184A)

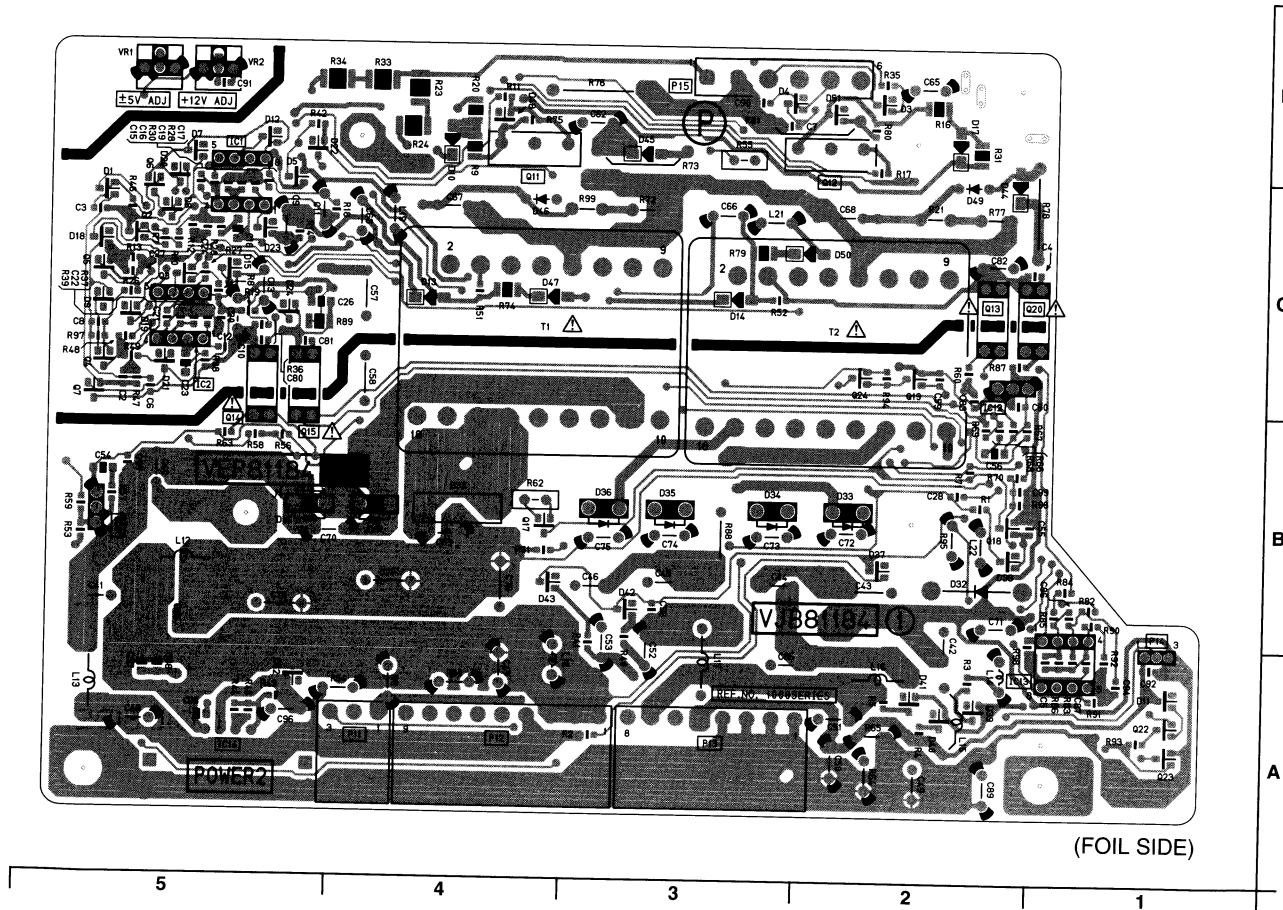
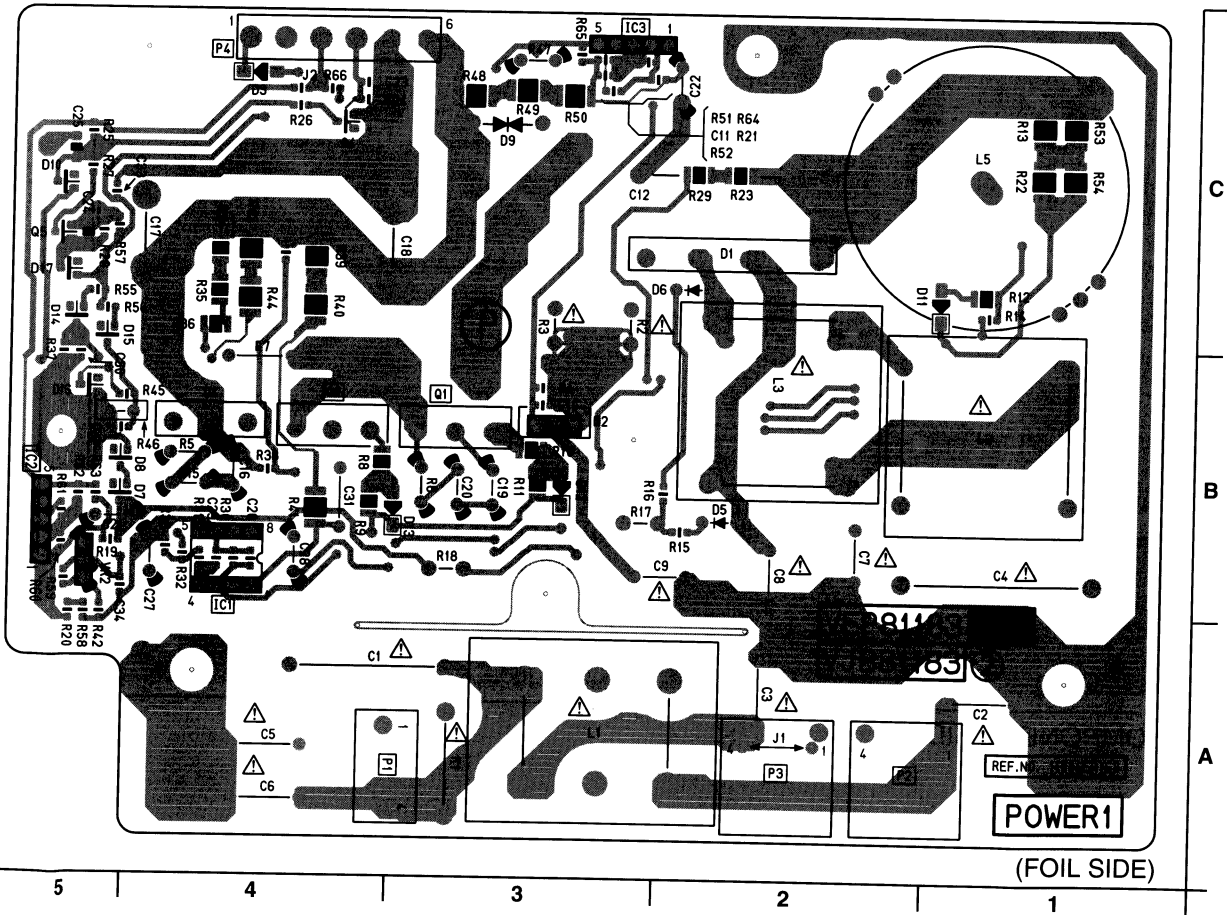
REF	LOC	REF	LOC
Q11	D4	P11	A4
Q12	D2	P12	A4
Q13	C2	P13	A3
Q14	C5	P14	A1
Q15	C5	P15	D3
Q20	C2		
IC1	C5		
IC2	C5		
IC11	B6		
IC12	C2		
IC13	A1		
IC14	A5		
VR1	D5		
VR2	D5		

(FOIL SIDE)

CAUTION

THE MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY
CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



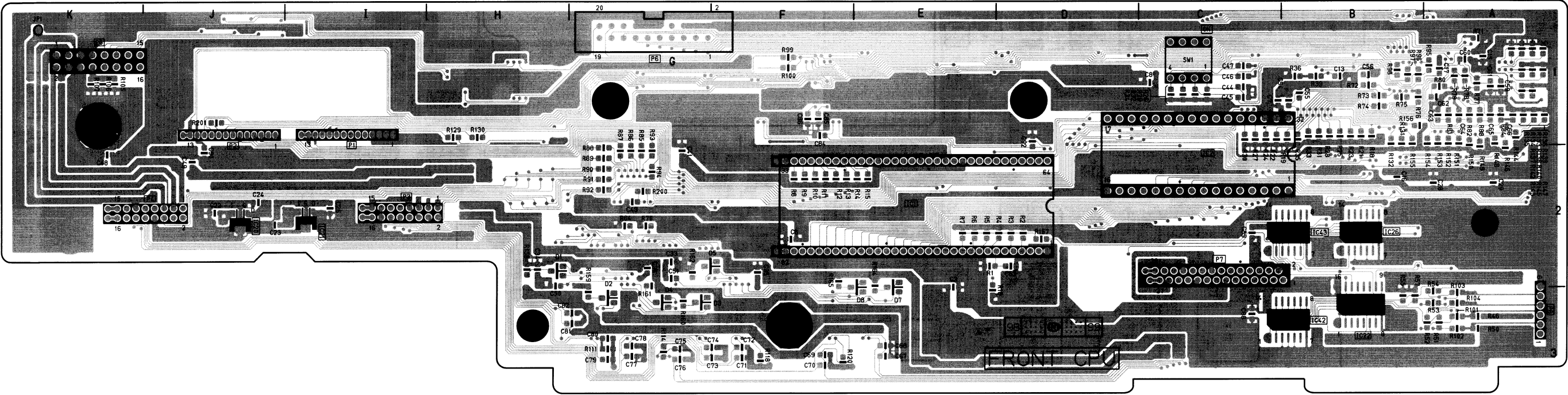
FRONT CPU P.C. BOARD (VEP86285B)

REF	LOC
IC20	J2
IC21	I2
IC22	B3
IC26	B2
IC42	B3
IC43	B2

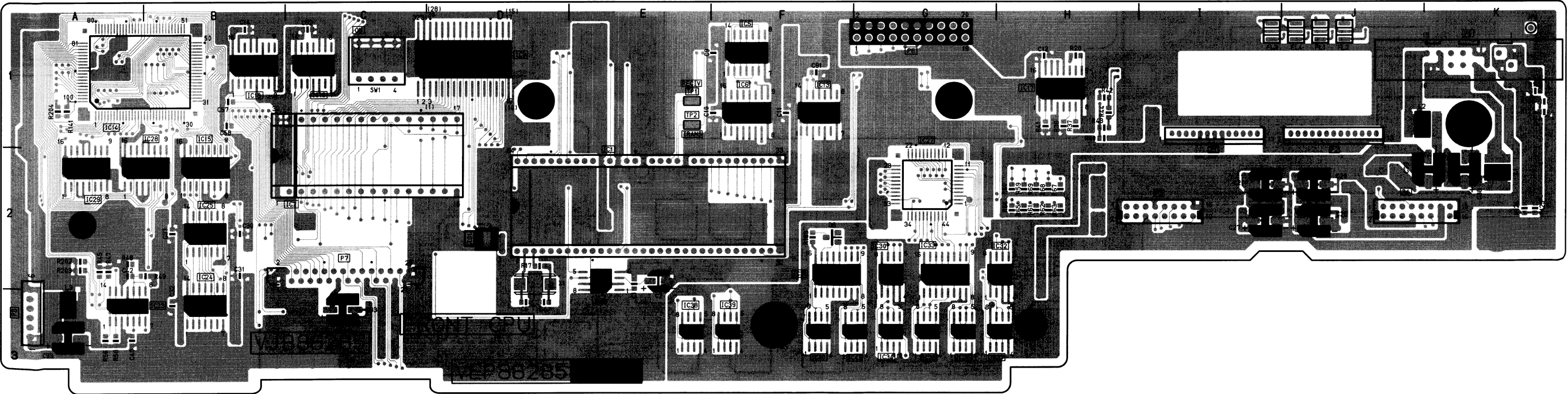
(FOIL SIDE)

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	D2	IC17	H1	IC32	H2	P1	I1
IC2	B2	IC18	B1	IC33	G2	P2	J1
IC3	D1	IC23	A3	IC34	G3	P3	H2
IC4	E2	IC24	B3	IC35	G3	P4	K2
IC5	F1	IC25	B2	IC36	G3	P5	K1
IC6	F1	IC27	G2	IC37	H3	P6	E1
IC13	F1	IC28	B2	IC38	E3	P7	C2
IC14	A1	IC29	A2	IC39	F3	P8	A3
IC15	B2	IC30	G2	IC40	F3	SW1	C1
IC16	C1	IC31	F2	IC41	G3	X1	D3

(COMPONENT SIDE)



(FOIL SIDE)

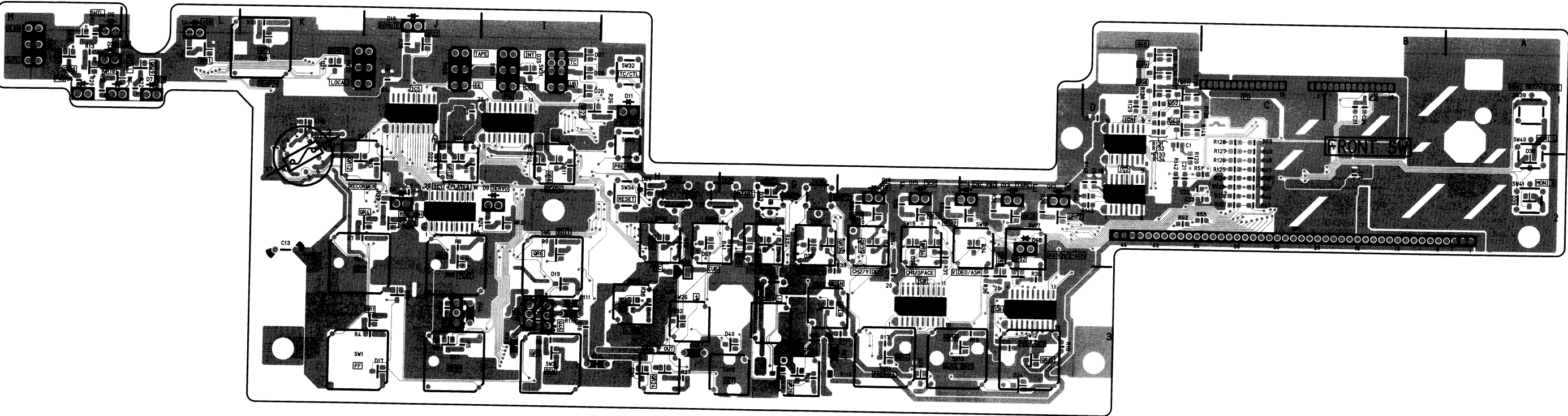


(COMPONENT SIDE)

FRONT SW P.C. BOARD (VEP80A49C)

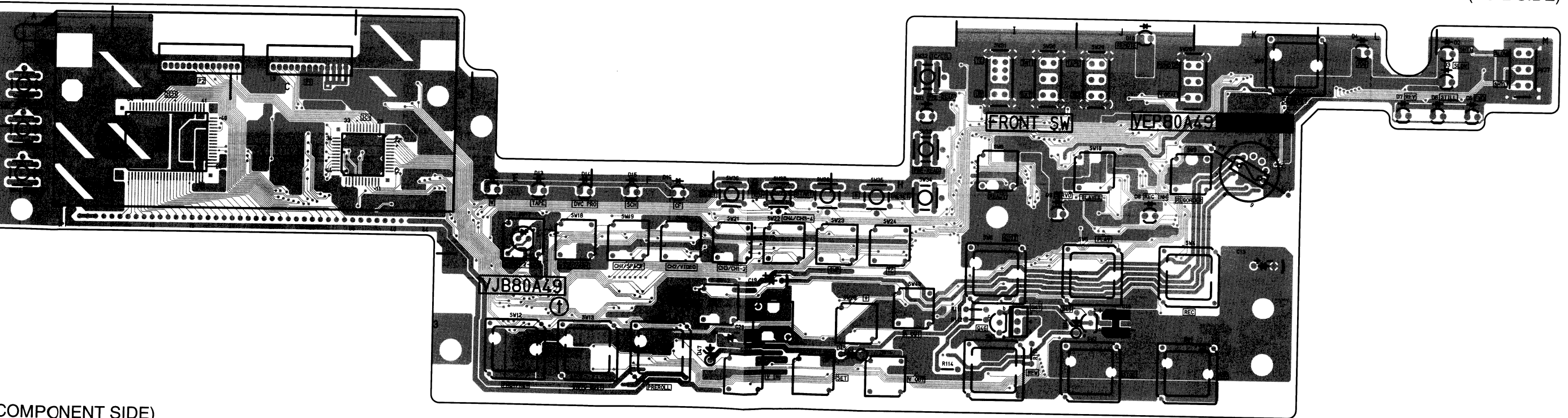
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC2	D2	Q49	D1	QR4	J2	QR12	K2	QR20	J2	QR28	E2	QR36	G2
IC3	D1	Q50	D1	QR5	J3	QR13	J2	QR21	I2	QR29	E2	QR37	G2
IC5	J1	Q51	D1	QR6	I2	QR14	F3	QR22	J1	QR30	F2	QR38	G2
IC6	I1	Q52	D1	QR7	K1	QR15	E3	QR23	I1	QR31	F2	QR39	H2
IC7	J2	Q53	D1	QR8	I2	QR16	E3	QR24	H3	QR32	E3	QR40	G3
IC8	E3	QR1	J3	QR9	M1	QR17	M1	QR25	H3	QR33	E3		
IC9	F3	QR2	J3	QR10	M1	QR18	M1	QR26	G3	QR34	F2		
Q48	D1	QR3	I3	QR11	L1	QR19	L1	QR27	E2	QR35	F2		

(FOIL SIDE)



REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	D2	SW2	J3	SW10	J2	SW18	E2	SW26	H3	SW34	H2	SW42	G3
IC11	B2	SW3	I3	SW11	F3	SW19	F2	SW27	M1	SW35	H2	SW43	H3
P1	C1	SW4	J3	SW12	E3	SW20	F2	SW28	J1	SW36	G2		
P2	C1	SW5	J3	SW13	E3	SW21	G2	SW29	J1	SW37	G2		
Q45	J3	SW6	I3	SW14	H3	SW22	G2	SW30	I1	SW38	G2		
Q46	I3	SW7	K1	SW15	G3	SW23	H2	SW31	I1	SW39	A1		
Q47	I3	SW8	I2	SW16	G3	SW24	H2	SW32	H1	SW40	A2		
SW1	J3	SW9	J2	SW17	E2	SW25	G3	SW33	H2	SW41	A2		

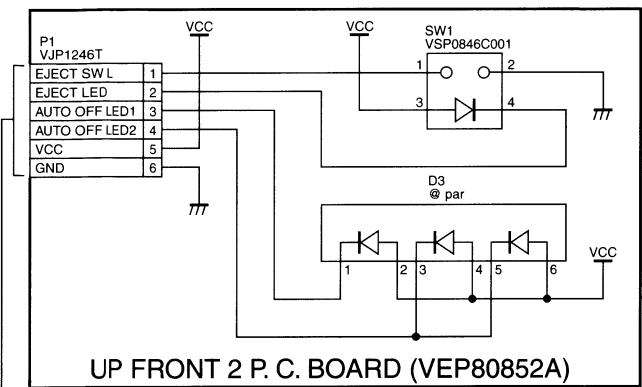
(COMPONENT SIDE)



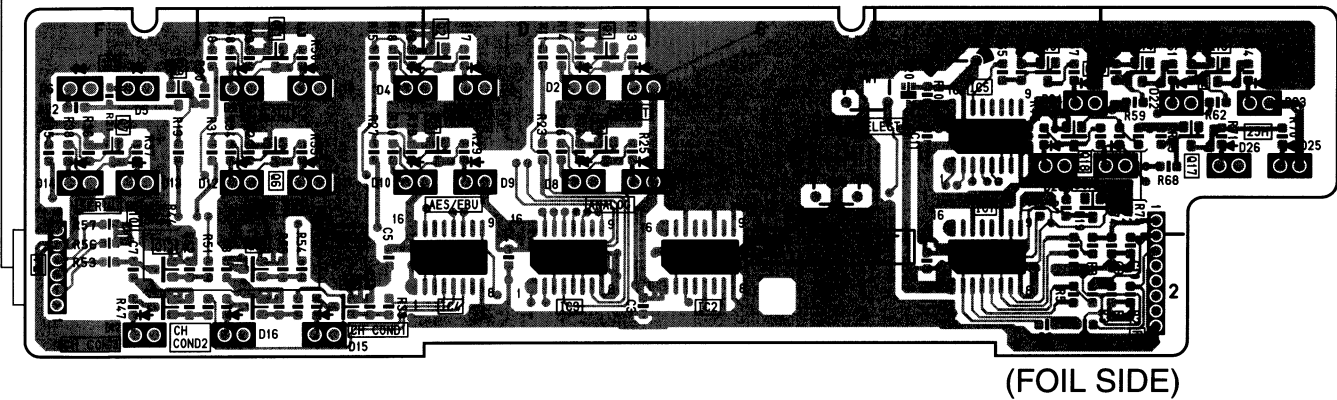
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(COMPONENT SIDE)

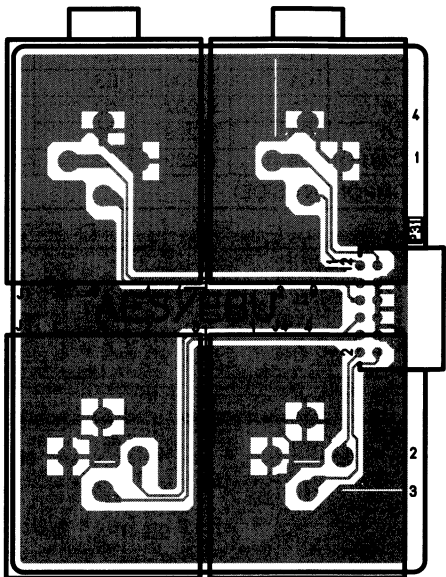
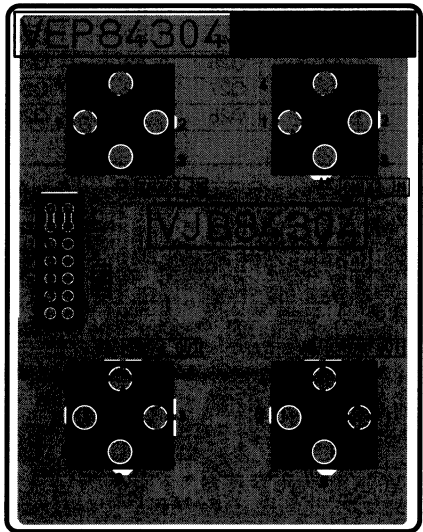
UP FRONT 1 P.C. BOARD (VEP80A52B)



REF	LOC	REF	LOC	REF	LOC
IC1	B2	Q3	F1	Q11	E1
IC2	D2	Q4	D1	Q12	F2
IC3	D2	Q5	E1	Q13	F2
IC4	E2	Q6	E1	Q14	B1
IC5	B1	Q7	F1	Q15	A1
IC6	C1	Q8	E2	Q16	B1
Q1	D1	Q9	F2	Q17	A1
Q2	E1	Q10	F2	Q18	B1



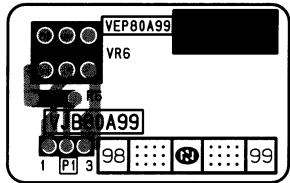
AES/EBU P.C. BOARD (VEP84304B)



(FOIL SIDE)

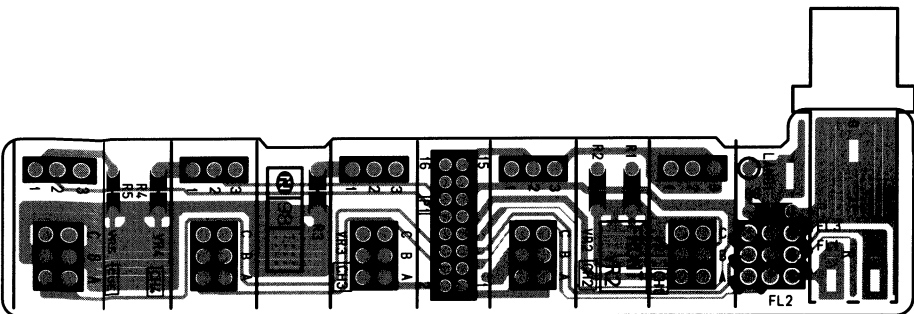
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FRONT VR1 P.C. BOARD (VEP80A99A)



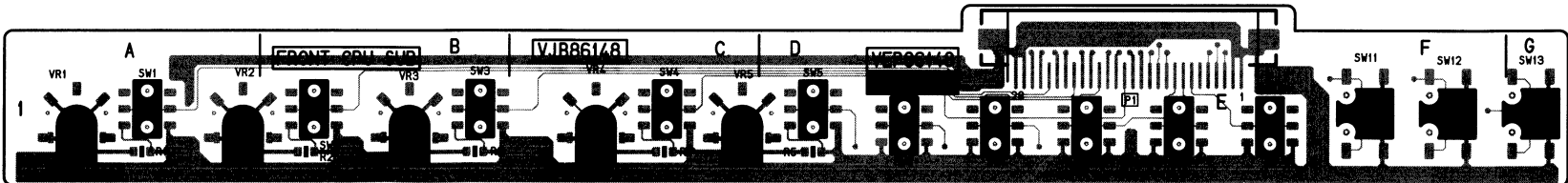
(FOIL SIDE)

FRONT VR2 P.C. BOARD (VEP80B00A)



(FOIL SIDE)

FRONT CPU SUB P.C. BOARD (VEP86148D)

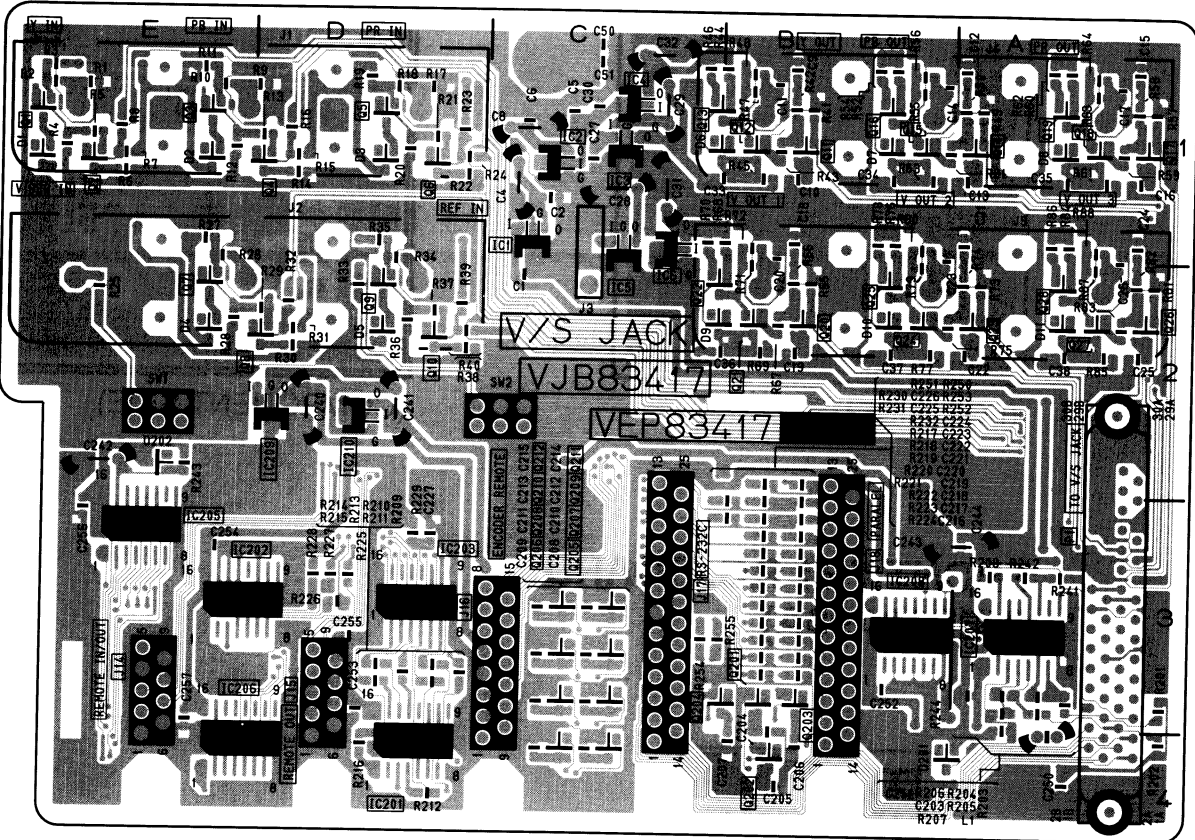


(COMPONENT SIDE)

V/S JACK P.C. BOARD (VEP83417B)

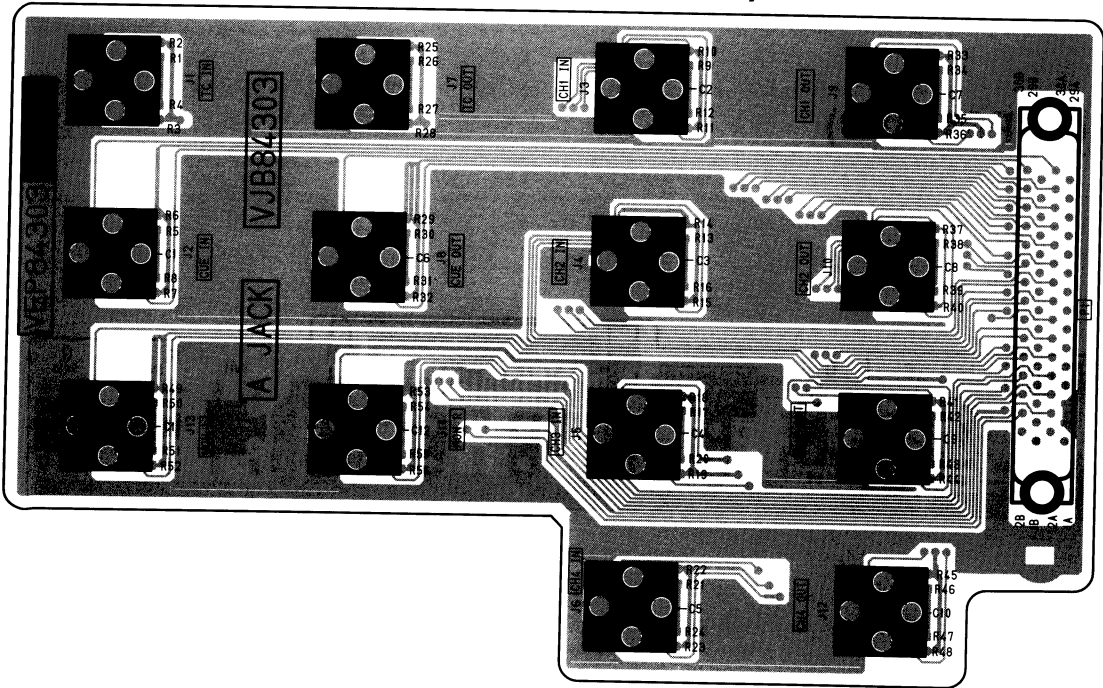
REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	C1	IC202	E3	IC210	D2	Q15	B1	Q22	C2	Q201	B3	Q208	C3
IC2	C1	IC203	D3	Q9	D2	Q16	B1	Q23	A2	Q202	B4	Q209	C3
IC3	C1	IC205	E3	Q10	D2	Q17	A1	Q24	B2	Q203	B4	Q210	C3
IC4	C1	IC206	E3	Q11	B1	Q18	A1	Q25	B2	Q204	B3	Q211	C2
IC5	C1	IC207	A3	Q12	B1	Q19	A1	Q26	A2	Q205	C3	Q212	C2
IC6	C1	IC208	B3	Q13	C1	Q20	B2	Q27	A2	Q206	C3		
IC201	D4	IC209	D2	Q14	A1	Q21	B2	Q28	A2	Q207	C3		

(COMPONENT SIDE)



(FOIL SIDE)

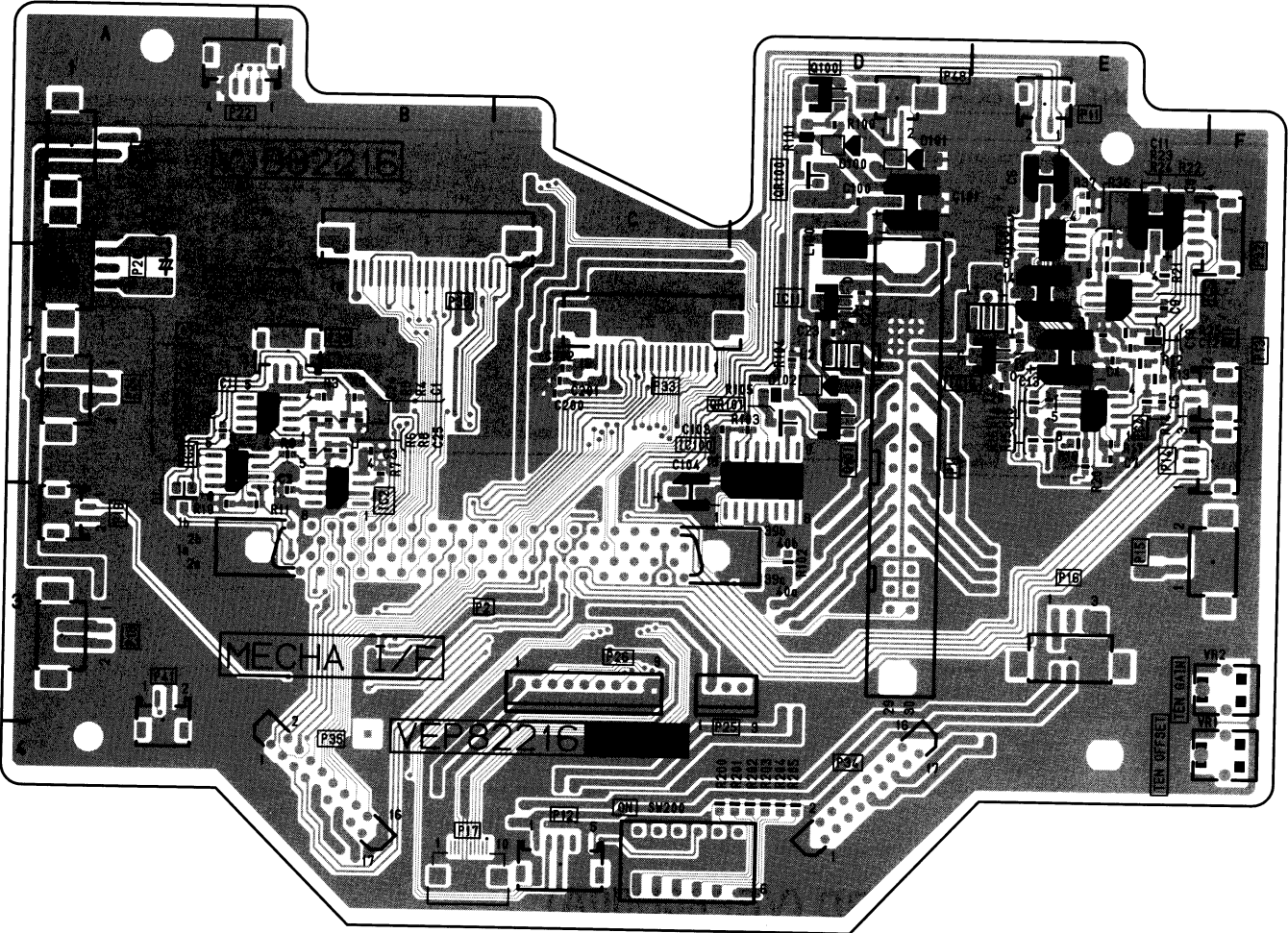
AUDIO JACK P.C. BOARD (VEP84303C)



MECHA I/F P.C. BOARD (VEP82216B)

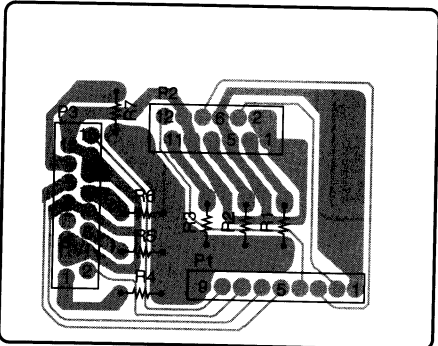
REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	A2	P11	E1	P22	A1	P48	D1
IC2	B3	P12	C4	P24	A2	Q1	F2
IC3	A2	P13	F2	P25	D3	Q100	D1
IC4	E2	P14	E2	P26	C3	Q101	D2
IC5	F2	P15	E3	P30	B2	QR100	D1
IC6	E1	P16	E3	P32	F1	QR101	D2
IC10	E2	P17	B4	P33	C2	VR1	F3
IC11	D2	P18	A3	P34	D4	VR2	F3
IC100	C2	P19	A3	P35	B4		
P1	D2	P20	A2	P36	B2		
P2	B3	P21	A1	P41	A3		

(COMPONENT SIDE)



(COMPONENT SIDE)

CARRIGE P.C. BOARD (VEP80856A)



(FOIL SIDE)

SECTION 6

EXPLODED VIEWS & REPLACEMENT PARTS LISTS

Note:

1. *Be sure to make your orders of replacement parts according to this list.
2. Unless otherwise specified, all resistors are in OHMS, K=1,000 OHMS, all capacitors are in MICROFARADS (μF), P= $\mu\mu F$.
3. The P.C. Board untils marked with "■" shown below the main assembled parts.
4. The parts marked with (E) on the exploded view show the electric parts.
5. **IMPORTANT SAFETY NOTICE**
Components identified with the mark Δ have the special characteristics for safety. When replacing any of these components, use only the same type.
6. The marking (RTL) indicates the retention time is limited for this item.
After the diacontinuation of this assembly in production, it will no longer be available.

<< Abbreviations for part >>

< NAME >	< DESCRIPTIONS >
C. CAPACITOR	: CERAMIC CAPACITOR
C. CAPACITOR	CH : CERAMIC CHIP CAPACITOR
E. CAPACITOR	: ELECTROLYTIC CAPACITOR
G. CAPACITOR	: GLASS CAPACITOR
M. CAPACITOR	: MICA CAPACITOR
P. CAPACITOR	: PLASTIC FILM CAPACITOR
S. CAPACITOR	: SEMI-CONDUCTOR CAPACITOR
T. CAPACITOR	: TANTALUM CAPACITOR
TRIMMER	: TRIMMER
C.RESISTOR	: CARBON RESISTOR
F.RESISTOR	: FUSE RESISTOR
M.RESISTOR	: METAL OXIDE RESISTOR
M.RESISTOR	CH : METAL OXIDE CHIP RESISTOR
S.RESISTOR	: SOLID RESISTOR
V.RESISTOR	: VARIABLE RESISTOR
W.RESISTOR	: WIRE WOUND RESISTOR
COMBI. TR-R	: TRANSISTOR-RESISTOR COMBINATION PARTS
COMBI. R-R	: RESISTOR-RESISTOR COMBINATION PARTS
COMBI. C-R	: CAPACITOR-RESISTOR COMBINATION PARTS
COMBI. C-R-R	: CAPACITOR-RESISTOR-COIL COMBINATION PARTS
P.C.-BOARD	: PRINTED CIRCUIT BOARD
W/COMPONENT	: WITH COMPONENT

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF THE HISTORY OF ARTS AND ARCHITECTURE

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SERVICING FIXTURES & TOOLS

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VFK1145	BACK TENSION METER	1		42	VFK1248A	FLASH ROM VERSION UP SOFT	1	
2	VFK1149	POST DRIVER	1		43	VFK1304A	ROM REWRITER	1	
3	VFK71	DIAL TORQUE GAUGE (150G)	1					1	
4	VFK1191	DIAL TORQUE GAUGE (45G)	1					1	
5	VFK1152	DIAL TORQUE GAUGE ADAPTOR	1					1	
6	VFK0357	ECCENTRIC SCREWDRIVER	1		47	VFK0369	TWEEZERS	1	
7	VFL1154	POST HEIGHT FIXTURE	1		48	VFK0371	RADIO PRIER	1	
8	VFK1153	MECH. NEUTRAL PLATE	1		49	VFK0372	CUTTER PRIER	1	
9	VFK0906	OIL	1		50	VFK0338	TRIMMER ADJUSTMENT DRIVER	1	
10	VFK1155	REV POSITION TOOL	1		51	VFK0337	PHILIPS DRIVER	1	
11	VFK1156	PLAY POSITION TOOL	1						
12	VFK1208	NEUTRAL POSITION TOOL	1						
13	VFK1150	NUT DRIVER (5.5MM)	1						
14	VFK1151	NUT DRIVER (2.5MM)	1						
15	VFK1188	DIAL TENSION GAUGE (30G)	1						
16	VFK0948A	CHECK LIGHT	1						
17	VFK0749	FROIRAL GREASE	1						
18	MOR265	MORLYTONE GREASE	1						
19	VFK1146	PHILIPS DRIVER (FINE)	1						
20	VFK1147	PHILIPS DRIVER (FINE)	1						
21	VFK1148	HEX. DRIVER (1.5)	1						
22	VFK1178	HEX. DRIVER (0.89)	1						
23	VFK1179	HEX. DRIVER (0.71)	1						
24	VFK1190	HEX. WRENCH	1						
25	VFK1209	TORQUE DRIVER	1						
26	VFK1375	POST AXIS DRIVER (1.5MM)	1						
27	VFK1300	A/D BOARD	1						
28	VFM3580KM	ALIGNMENT TAPE (NO. 1)	1	FOR NTSC					
29	VFM3581KM	ALIGNMENT TAPE (NO. 2)	1	FOR NTSC					
30	VFM3582KM	ALIGNMENT TAPE (NO. 3)	1	FOR NTSC					
31	VFM3680KM	ALIGNMENT TAPE (NO. 1)	1	FOR PAL					
32	VFM3681KM	ALIGNMENT TAPE (NO. 2)	1	FOR PAL					
33	VFM3682KM	ALIGNMENT TAPE (NO. 3)	1	FOR PAL					
34	VFM3000EDS	ALIGNMENT TAPE (DV LISTA)	1						
			1						
			1						
37	AJ-CL12MP	CLEANING TAPE	1						
38	VFK1481	LISTA SOFTWARE	1						
39	VFK1186	LISTA CABLE	1						
40	VFK1423	TAPE DET. SENSOR CASSETTE	1						
41	VZZ0095	CLEANING CROSS	1						

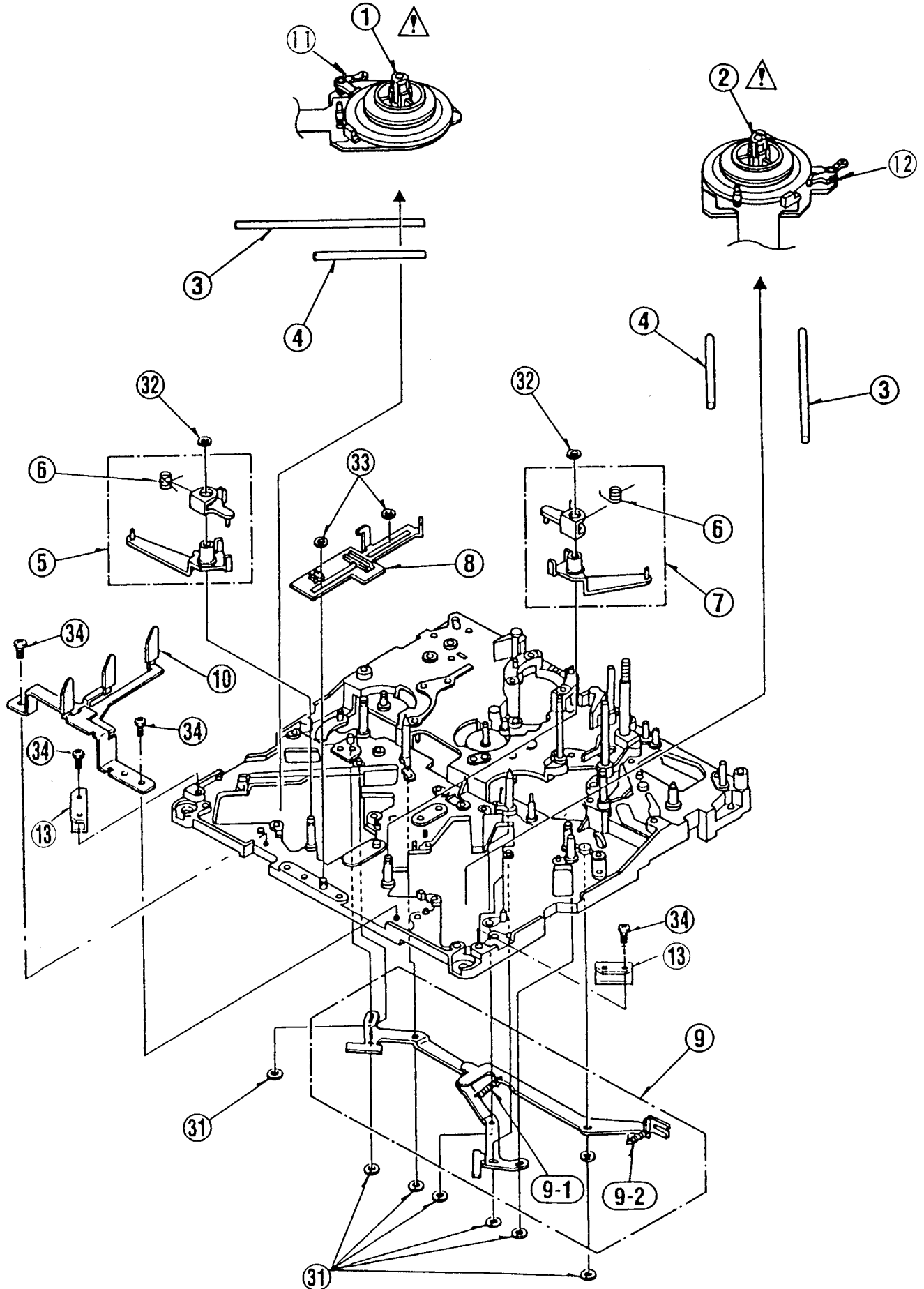
When replacing any of these components, use only the same type.

MECHANICAL CHASSIS ASSEMBLY (1)

[illegible]

Components identified with the mark  have the special characteristics for safety.
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MECHANICAL CHASSIS ASSEMBLY (1)



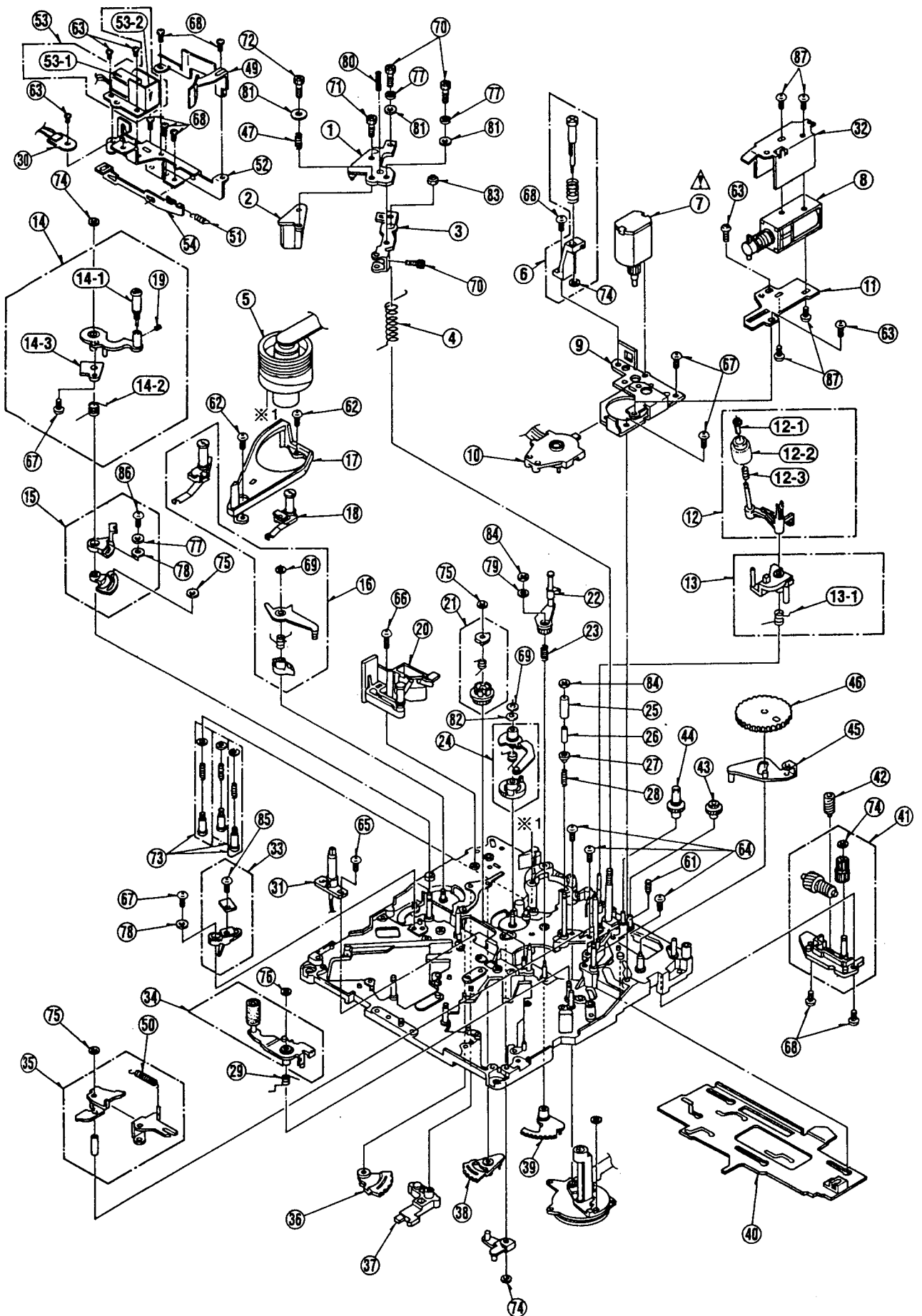
Components identified with the mark Δ have the special characteristics for safety.
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MECHANICAL CHASSIS ASSEMBLY (2)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA5554	A/C HEAD BASE (1) ASS'Y	1		67	XQN2+CF3	SCREW	12	
2	VED0419	A/C HEAD	1 (M)		68	XQN2+CF4	SCREW	3	
3	VXA6067	A/C HEAD BASE (2) ASS'Y	1		69	XUC12FP	E-RING	2	
4	VMB2935	A/C HEAD HIGH SPRING	1		70	XVE2B4FZ	HEX SCREW	3	
5	VEG1503	CYLINDER UNIT	1 (M)		71	XVE2B6FP	HEX SCREW	1	
6	VXA5715	EMERGENCY SHIFT HOLDER	1		72	XVE2B12FP	HEX SCREW	1	
7	VEM0645	LOADING MOTOR (1)A ASS'Y	1 (M)		73	VX00439	SCREW	3	
8	VSJ0227	PINCH SOLENOID	1 (M)		74	VMD0967	CUT WASHER	3	
9	VXA5584	MOTOR ANGLE ASS'Y	1		75	VMX1061	WASHER	3	
10	VES0814	MODE SW ASS'Y	1 (M)		76	VMD1079	CUT WASHER	1	
11	VMA9376	PINCH SOLENOID BASE	1		77	XWA2B	WASHER	4	
12	VXL2924	CLEANING ARM A ASS'Y	1 (M)		78	XWE2	WASHER	2	
12-1	VMD2150	CLEANER ROLLER HOLDER	1		79	XWE16VW	WASHER	1	
12-2	VXP1963	CLEANER ROLLER ASS'Y	1		80	XXE2A6FP	HEX SCREW	1	
12-3	VMB3114	CLEANER ROLLER SPRING	1		81	XWG2	WASHER	3	
13	VXL2870	T2 ARM ASS'Y	1		82	XWGV15Z32G	WASHER	2	
13-1	VMB3304	T2 ARM SPRING	1		83	VHD0045	NYLON NUT	1	
14	VXL2832	TENSION ARM A ASS'Y	1 (M)		84	VHN0312	NUT	2	
14-1	VXP1761	TENSION ROLLER	1		85	XQN2+A03.5FZ	SCREW	1	
14-2	VMB3220	TENSION LEG SPRING	1		86	XQN2+A.J5	SCREW	1	
14-3	VXA6173	MAGNET HOLDER ASS'Y	1		87	XQN2+A1.5	SCREW	4	
15	VXA5791	TENSION LEG SPRING HOOK	1		88	XQN2+A4	SCREW	1	
16	VXL2812	S1 LOADING ARM ASS'Y	1 (M)		89	VMD1394	CUT WASHER	1	
17	VMD2533	LOADING RAIL	1		*	VXY1418Z1	MECHANISM	1 (M)	
18	VXA6378	T1 BOAT ASS'Y	1 (M)						
19	VHD0561	HEX SCREW	1						
20	VXA6052	S POST BASE A ASS'Y	1 (M)						
21	VXP1683	T4 CONNECTION GEAR ASS'Y	1						
22	VXL2772	T4 ARM ASS'Y	1						
23	VMB2950	T4 THRUST SPRING	1						
24	VXL2899	T LOADING ARM N ASS'Y	1						
25	VMS5906	T3 UPPER FRANGE	1						
26	VMS5905	T3 SLEEVE	1						
27	VMS5904	T3 LOWER FRANGE	1						
28	VMB2929	T3 SPRING	1						
29	VMB2933	PINCH RELEASE SPRING	1						
30	VEK7927	INSULATION SENSOR	1						
31	VEK7691	LED HOLDER P.C. BOARD	1						
32	VMA9411	PINCH SOLENOID ANGLE	1						
33	VXA5820	TENSION SENSOR ASS'Y	1						
34	VXL2835	PINCH ARM ASS'Y	1 (M)						
35	VXL2588	PINCH GUIDE ARM ASS'Y	1						
36	VXA5570	T SECTOR GEAR ASS'Y	1						
37	VXL2838	TENSION LEG. GUIDE ARM	1						
38	VXA5567	S SECTOR GEAR ASS'Y	1						
39	VXA5564	T4 SECTOR GEAR ASS'Y	1						
40	VXA5563	MAIN ROD ASS'Y	1						
41	VXA5627	THRUST SHAFT HOLDER ASS'Y	1						
42	VDG1166	MOTOR WARM GEAR	1						
43	VDG1268	MOTOR EMERGENCY GEAR A(A)	1						
44	VDG1267	MOTOR EMERGENCY GEAR B(A)	1						
45	VXL2889	MAIN CAM ARM ASS'Y	1						
46	VDG1168	MAIN CAM GEAR	1 (M)						
47	VMB2937	A/C HEAD ADJUST SPRING	1						
48	VXL2600	EJECT ARM ASS'Y	1						
49	VMD3475	T1 GUIDE ASS'Y	1						
50	VMB2934	SPRING	1						
51	VMB3051	CLEANER RETURN SPRING	1						
52	VXA6077	CLEANER BASE 1 ASS'Y	1						
53	VXA6078	CLEANER SOLENOID ASS'Y	1						
53-1	VSJ0226	CLEANER SOLENOID	1 (M)						
53-2	VMA9877	CLEANER SOLENOID BASE	1						
54	VMM0429	CLEANER INTERLOCK	1						
55	VX00556	THRUST SCREW ASS'Y	1 (M)						
56	VMT0871	SILENCER A	1						
57	VMT0872	SILENCER B	1						
61	VHD0356	SCREW	1						
62	XQN2+A3	SCREW	1						
64	XQN2+A35FZ	SCREW	3						
65	XQN2+AM2	SCREW	3						
66	XQN2+AM4	SCREW	1						

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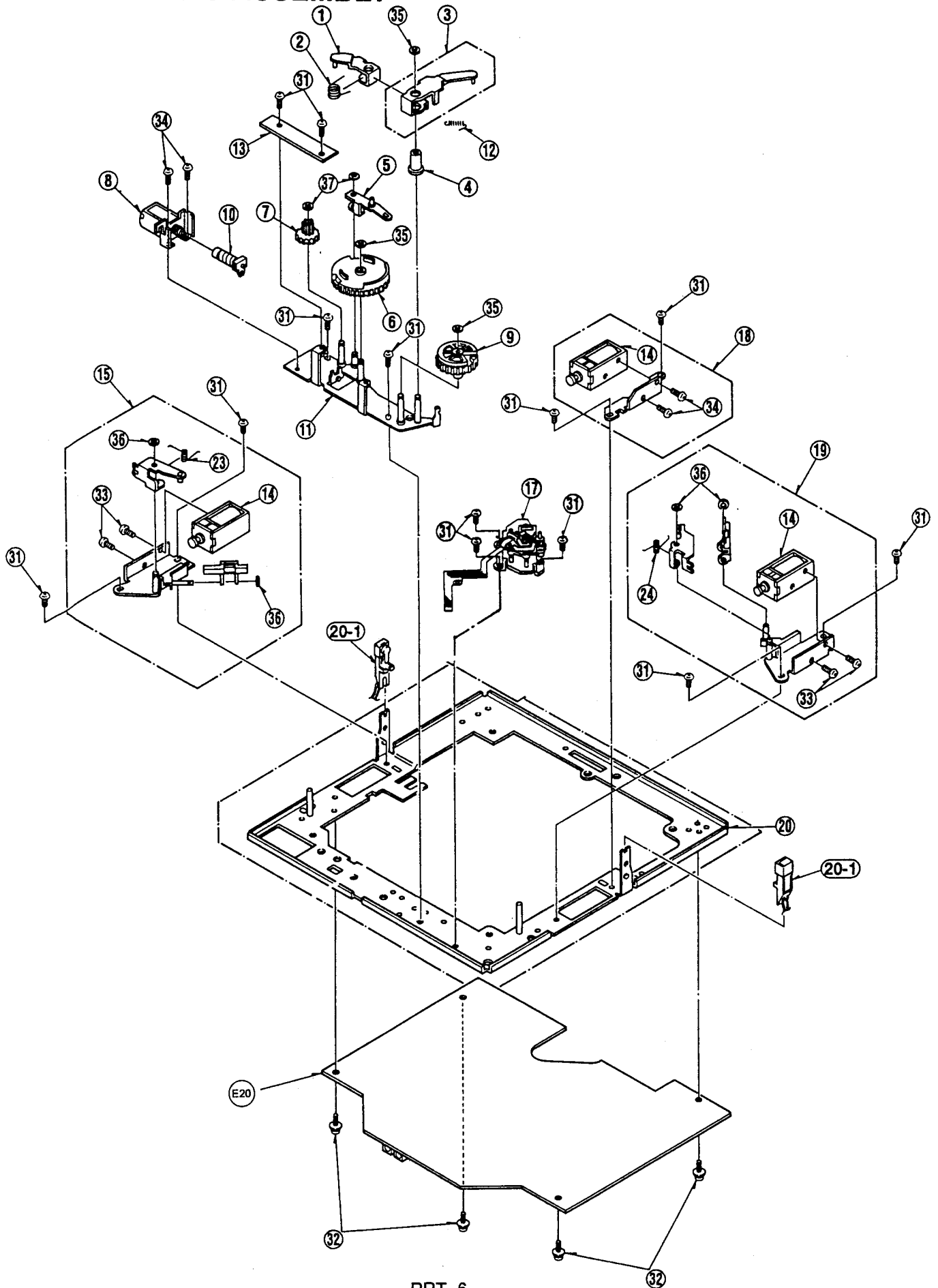
MECHANICAL CHASSIS ASSEMBLY (2)




SUB CHASSIS ASSEMBLY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXL2656	MIC DRIVE ARM (A) ASS'Y	1	
2	VMB3018	MIC DRIVE SPRING	1	
3	VXL2657	MIC DRIVE ARM (B) ASS'Y	1	
4	VDB1429	MIC DRIVE ARM BOSS	1	
5	VXL2613	REEL DRIVE ARM ASS'Y	1	
6	VDG1192	REEL DRIVE CAM GEAR	1	
7	VDG1193	REEL DRIVE WORM WHEEL	1	
8	VEM0585	REEL DRIVE MOTOR ASS'Y	1 (M)	
9	VDG1211	MIC GENEVA GEAR	1	
10	VXP1698	REEL DRIVE WORM ASS'Y	1	
11	VXA5628	MOTOR BASE U.	1	
12	VMB3019	MIC DRIVE RETURN SPRING	1	
13	VEK7726	REEL SENSOR P.C.BOARD	1	
14	VSJ0216	BRAKE SOLENOID	3 (M)	
15	VXA5575	S-BRAKE SOLENOID BASE ASS	1	
17	VXA6199	DISTINCTION SW ASS'Y	1 (M)	
18	VXA5579	M STOPPER SOLENOID ASS'Y	1	
19	VXA5887	T-BRAKE SOLENOID BASE	1	
20	VXK1336	SUB CHASSIS	1	
21	VEK7692	SENSOR HOLDER ASS'Y	1	
22	VMS6193	T BRAKE RELEASE ARM SHAFT	1	
23	VMB2957	S BRAKE SPRING	1	
24	VMB2987	T BRAKE SPRING	1	
31	XQN2+CF3	SCREW	13	
32	XYN26+K6	SCREW	4	
33	XQN2+A1.5	SCREW	2	
34	XQN2+A2	SCREW	2	
35	VMX1079	CUT WASHER	5	
36	VMX0967	CUT WASHER	4	
37	VMX1548	CUT WASHER	2	
38	XQN2+A1.5	SCREW	4	
E20	VEP82216B	MECH I/F P.C. BOARD	1	

SUB CHASSIS ASSEMBLY



PRT-6

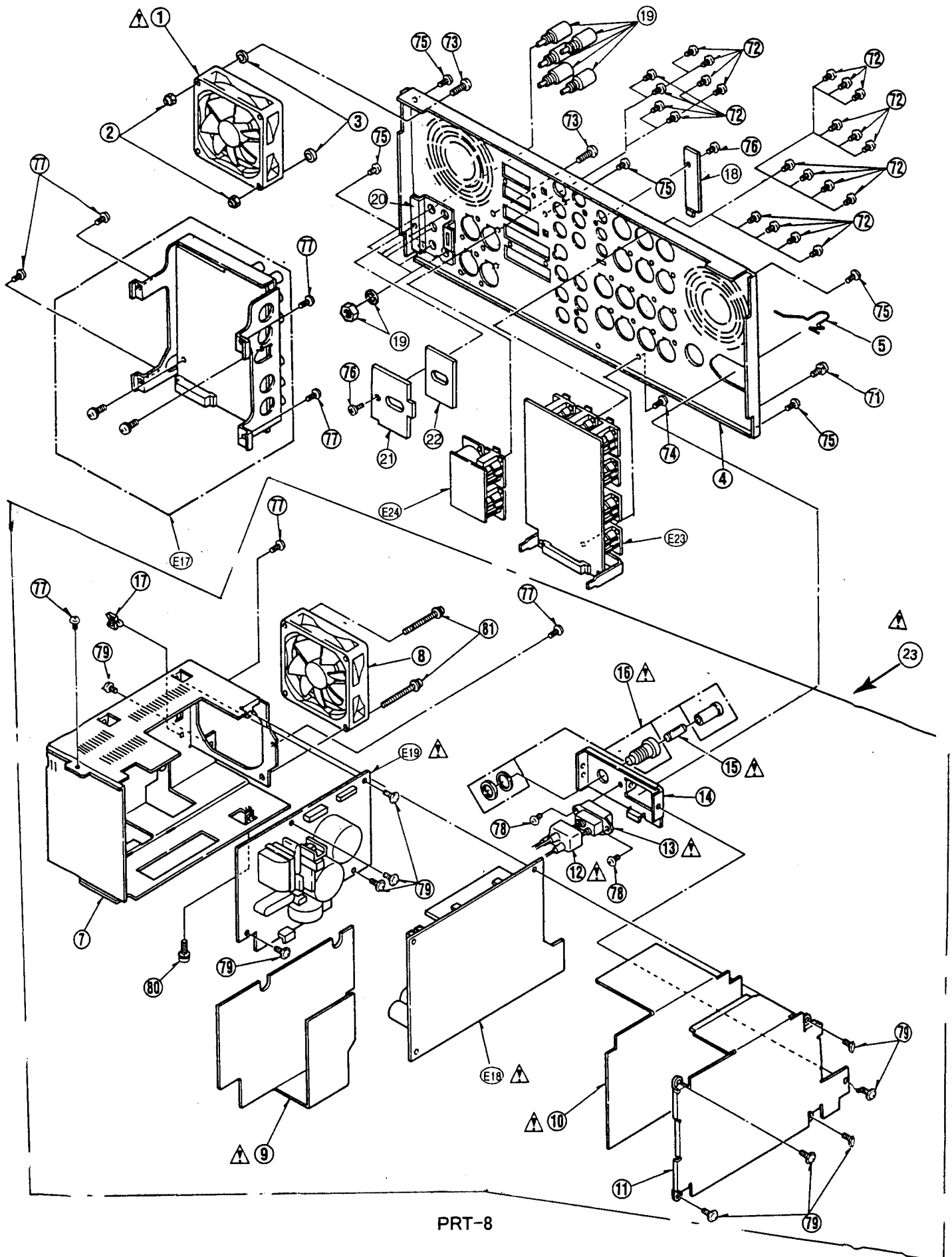
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REAR PANEL ASSEMBLY

[illegible]

Components identified with the mark \triangle have the special characteristics for safety.
When replacing any of these components, use only the same type.

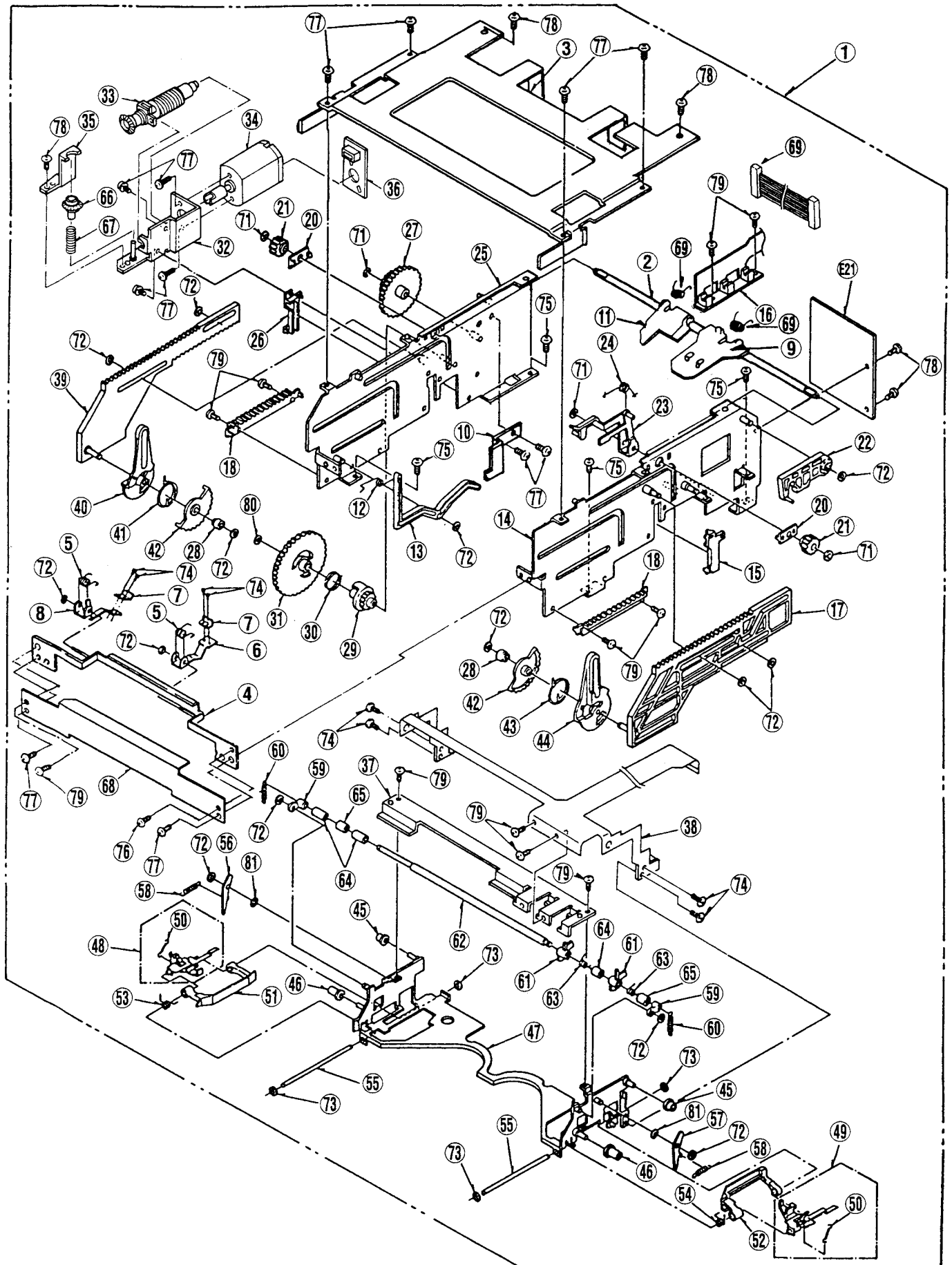
REAR PANEL ASSEMBLY



CASSETTE COMPARTMENT ASSEMBLY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA6070	CASSETTE COMPARTMENT	1 (M)		76	XQN2+A2	SCREW	2	
2	VMS5865	MAIN SHAFT	1		77	XYN2+C3	SCREW	12	
3	VMA9849	TOP PLATE	1		78	XQN2+A3	SCREW	5	
4	VXA5761	FRONT GUIDE 1 ASS'Y	1		79	LMHD16064	SCREW	10	
5	VMB3075	M GUIDE SPRING	2		80	XWGV2Y4G	WASHER	2	
6	VML3191	M GUIDE RIGHT LEVER	1		81	XWGV2Z5G	WASHER	2	
7	VML3192	M FRONT GUIDE	2						
8	VML3190	M GUIDE LEFT LEVER	1						
9	VML3397	CASSETTE PROTECT PLATE	1		E21	VEP80856A	CARRIGE P.C. BOARD	1	
10	VMA9760	L OPENER	1						
12	VMB2926	SPRING	1						
13	VML2A50	BLINDER PANEL OPENER	1						
14	VXA6074	R SIDE PLATE 1 ASS'Y	1						
15	VML3282	SUB RAIL (R)	1						
16	VEK7695	SIDE FLEXIBLE	1						
17	VXA5766	MAIN RACK R ASS'Y	1						
18	VDG1156	WIPER RACK	2						
20	VDB1395	MAIN SHAFT ANGLE	2						
21	VDG1155	INTERLOCK GEAR	2						
22	VML3193	OPENER DRIVE ARM	1						
24	VMB2979	SPRING	1						
23	VXL2692	OPENER ANGLE ASS'Y	1						
25	VXA6072	SIDE PLATE L 1 ASS'Y	1						
26	VML3281	SUB RAIL (L)	1						
27	VDG1254	INTERMEDIATE GEAR	1						
28	VDP1643	WIPER ROLLER	2						
29	VDG1237	CLUTCH GEAR	1						
30	VMB2980	CLUTCH SPRING	1						
31	VDG1236	WORM WHEEL	1						
32	VXA5848	MOTOR ANGLE (A) ASS'Y	1						
33	VXP1797	E.E SLOT IN WORM ASS'Y	1						
34	VXA5597	MOTOR ASS'Y	1 (M)						
35	VMA9673	EMERGENCY ANGLE	1						
36	VEK7793	MOTOR P.C. BOARD	1						
37	VMA9668	HOLDER PLATE	1						
38	VEK7715	HOLDER FLEXIBLE ASS'Y	1						
39	VXA6075	MAIN RACK (L) ASS'Y	1						
40	VML2A49	WIPER ARM L	1						
41	VMB2925	WIPER SPRING L	1						
42	VDG1163	WIPER GEAR	2						
43	VMB3013	WIPER SPRING R	1						
44	VML2A52	WIPER ARM R	1						
45	VDP1642	CASSETTE GUIDE ROLLER (2)	2						
46	VDP1641	CASSETTE GUIDE ROLLER (1)	2						
47	VXA5757	CASSETTE HOLDER 1 ASS'Y	1						
48	VXA5758	ROD L	1						
49	VXA5759	ROD R	1						
50	VMB3064	SLIDE SPRING	2						
51	VML3249	SIDE GUIDE L	1						
52	VML3250	SIDE GUIDE R	1						
53	VMB3061	SLIDE GUIDE SPRING L	1						
54	VMB3062	SLIDE GUIDE SPRING R	1						
55	VMS6108	KICK OFF ROD SHAFT	2						
56	VML2A54	KICK OFF ARM L	1						
57	VML2A55	KICK OFF ARM R	1						
58	VMB2928	KICK OFF SPRING	2						
59	VML2A53	CASSETTE HOLDER ARM	2						
60	VMB2927	CASSETTE HOLDER SPRING	2						
61	VMD2833	M-L DETECTION ROLLER	2						
62	VMS5882	CASSETTE HOLDER SHAFT	1						
63	VMB3253	M-L DETECTION SPRING	2						
64	VMD2559	CASSETTE PRESSURE ROLLER(2)	3						
65	VMD2524	CASSETTE PRESSURE ROLLER(1)	1						
66	VDG1246	EMERGENCY GEAR	1						
67	VMB3109	EMERGENCY SPRING	1						
68	VMZ2661	FRONT GUIDE COVER	1						
71	VMX0653	CUT WASHER	4						
72	VMX0967	CUT WASHER	14						
73	VMX1061	WASHER	4						
74	XQN16+A2	SCREW	8						
75	XQN2+CF3	SCREW	4						

CASSETTE COMPARTMENT ASSEMBLY




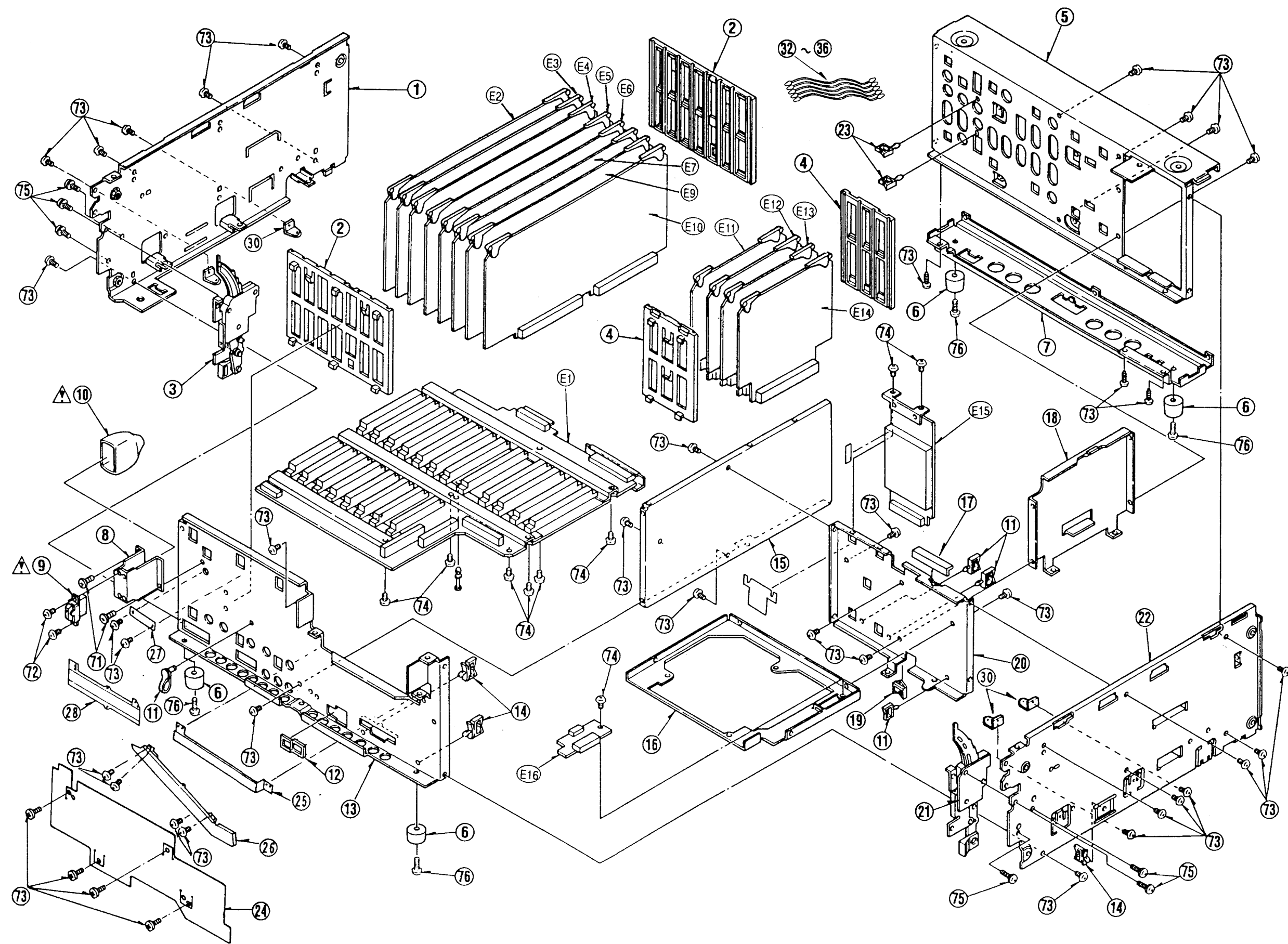
When replacing any of these components, use only the same type.

CHASSIS FRAME ASSEMBLY

[illegible]

CHASSIS FRAME ASSEMBLY

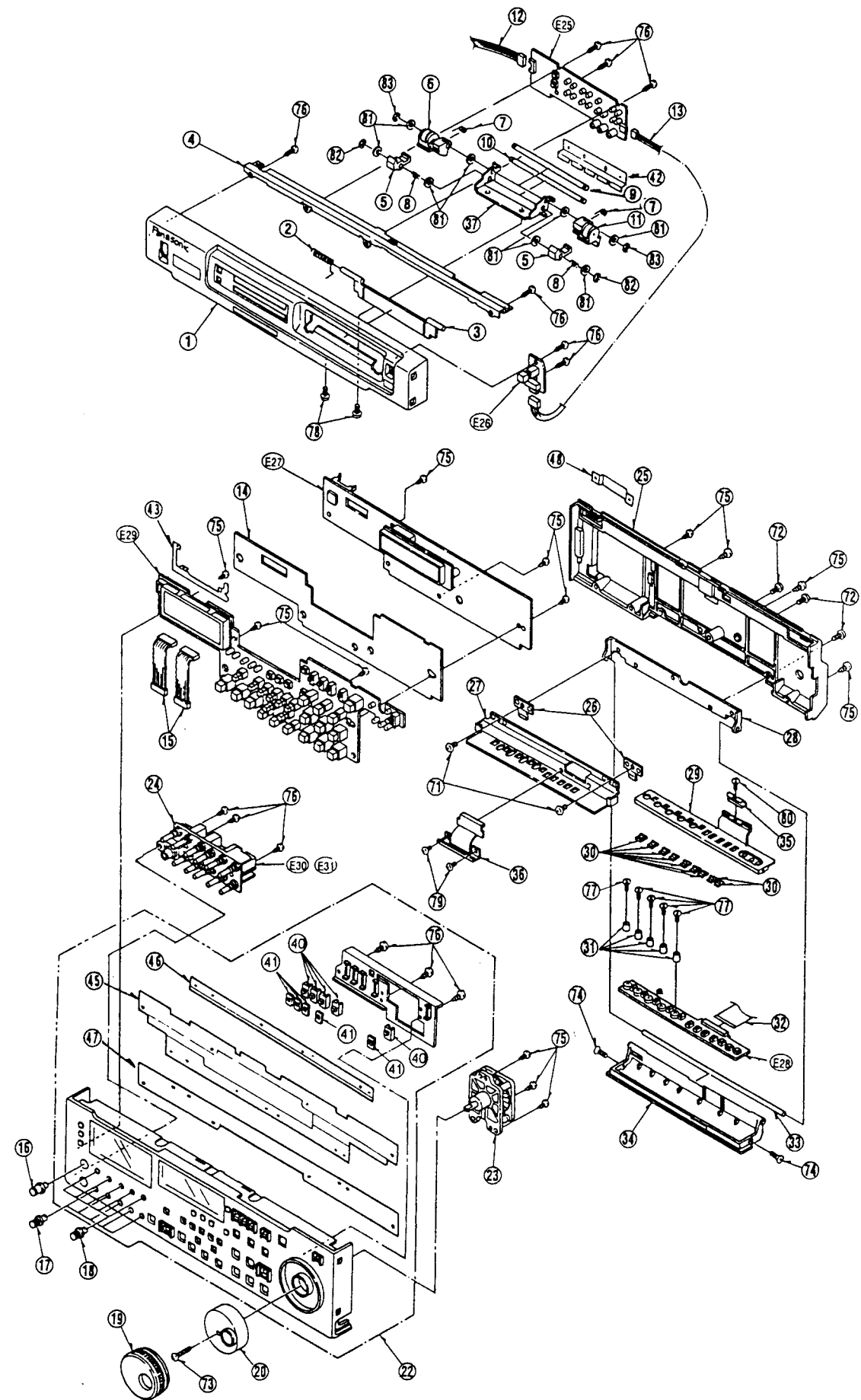
Components identified with the mark  have the special characteristics for safety.
When replacing any of these components, use only the same type.



FRONT PANEL ASSEMBLY

[illegible]

FRONT PANEL ASSEMBLY

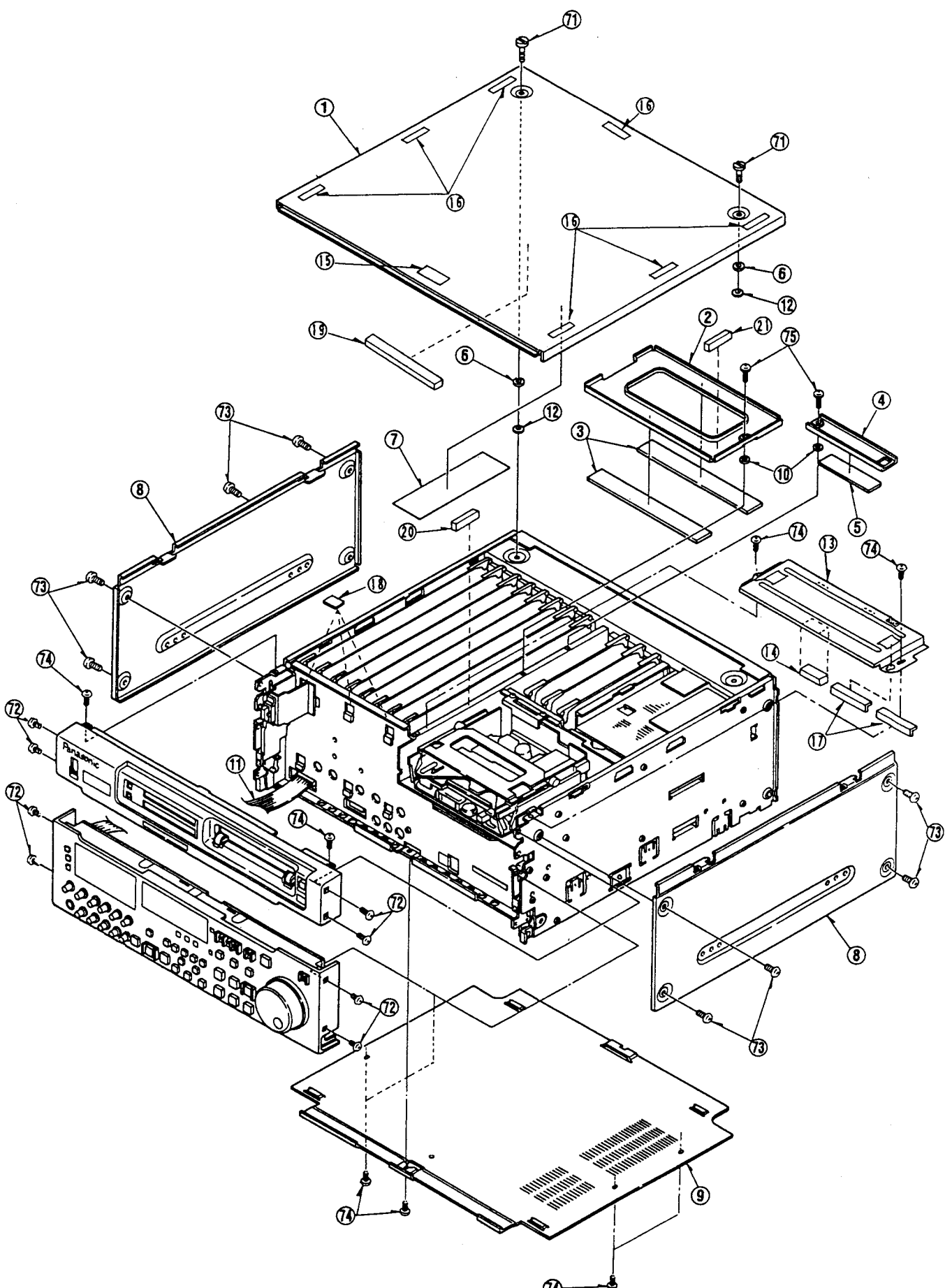


CASING PARTS ASSEMBLY


Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VGM1270	TOP PANEL	1						
2	VMP4884	P. C. BOARD PLATE L	1						
3	VMX2511	P. C. BOARD RUBBER CUSHION L	2						
4	VMP4885	P. C. BOARD PLATE S	1						
5	VMX2512	P. C. BOARD RUBBER CUSHION S	1						
6	VMX2510	SPACER	2						
7	VMZ2325	TOP PANEL BARRIER	1						
8	VGM1271	SIDE PANEL	2						
9	VKU0514	BOTTOM PLATE	1						
10	VMX1558	NYLON WASHER	2						
11	VEE9641	FRONT CABLE	1						
12	VMP2582	WASHER	2						
13	VMP5265	CARRIAGE SUPPORT	1						
14	VMT0797	GASKET C	1						
18	VMT0797	GASKET C	3						
19	VMT0785	DUST PROOF CUSHION (B)	1						
20	VMT0786	DUST PROOF CUSHION (C)	1						
21	VMT0890	DUST PROOF CUSHION (C)	1						
71	VHD0274	SCREW	2						
72	XSB3+8FZ	SCREW	8						
73	XSB4+8FC	SCREW	8						
74	XTV3+6F	SCREW	5						
75	XYN3+K8	SCREW	2						

PRT-15

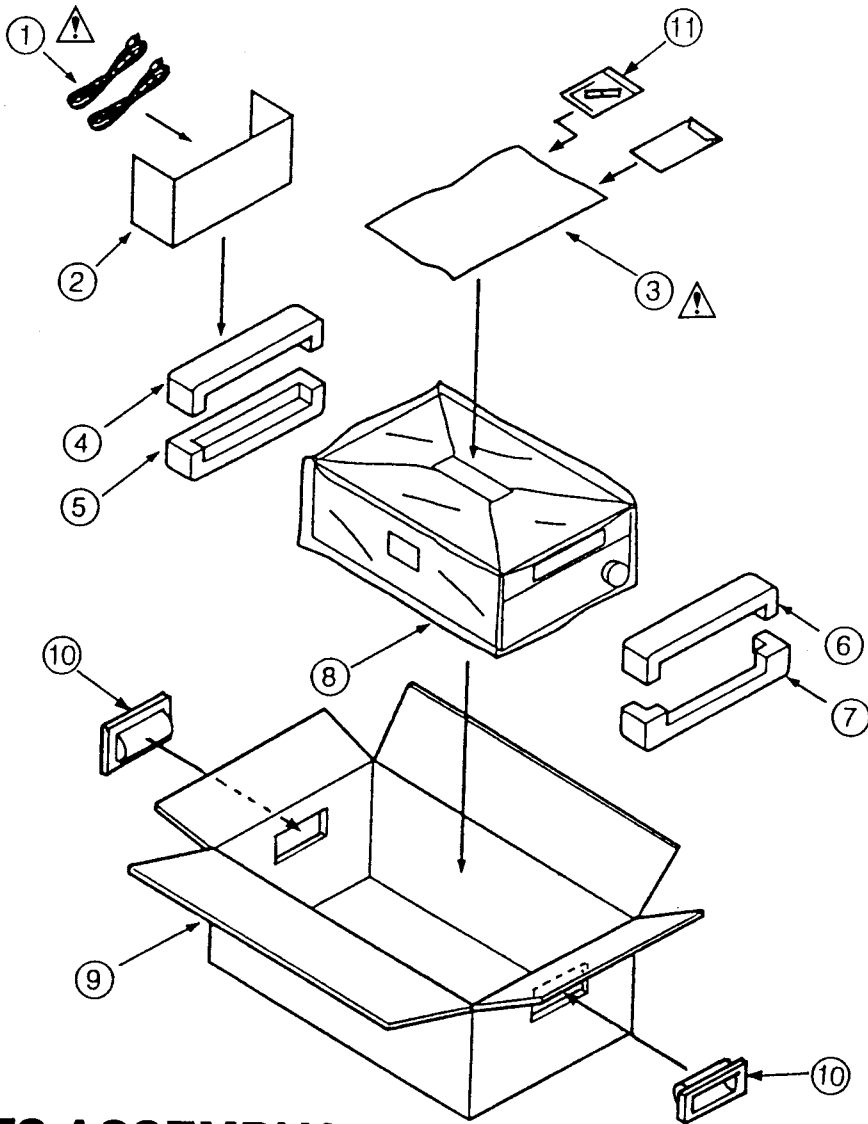
CASING PARTS ASSEMBLY








PRT-16

Components identified with the mark  have the special characteristics for safety.
When replacing any of these components, use only the same type.

PACKING PARTS ASSEMBLY



PACKING PARTS ASSEMBLY

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
 1	VJA0488	POWER CODE	1	FOR AJ-D940P					
 1	VJA0774	POWER CODE	1	FOR AJ-D940E (E)					
 1	VJA0775	POWER CODE	1	FOR AJ-D940E (B)					
2	VPN4305	ACCESSORY PAD	1						
 3	VQT7952	OPERATING INSTRUCTIONS	1	FOR AJ-D940P					
 3	VQT7953	OPERATING INSTRUCTIONS	1	FOR AJ-D940E					
4	VPN4302	CUSHION UL	1						
5	VPN4304	CUSHION LL	1						
6	VPN4606	CUSHION UR	1						
7	VPN4607	CUSHION LR	1						
8	VPF0277	POLYETHYLENE BAG	1	FOR AJ-D940P					
8	VPF0673	POLYETHYLENE BAG	1	FOR AJ-D940E					
9	VP09734	PACKING CASE	1	FOR AJ-D940P					
9	VP09735	PACKING CASE	1	FOR AJ-D940E					
10	VPF0149	HANDLE	2						
11	VXF0151	EMERGENCY EJECT ASS'Y	1						

ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E1	VEP80A96A	MOTHER P.C. BOARD	1	(RTL)	■ E1	VEP80A96A	MOTHER P.C. BOARD	1	(RTL)
■ E2	VEP82221A	F1 SERVO P.C. BOARD	1	(RTL)	P001-06	VJS3814	CONNECTOR (FEMALE)	6	
■ E3	VEP86284B	F2 SYSCON P.C. BOARD	1	(RTL)	P007-10	VJS3510	CONNECTOR (FEMALE)	4	
■ E4	VEP83444A	F3 NON TRK P.C. BOARD	1	(RTL)	P011-20	VJS3814	CONNECTOR (FEMALE)	10	
■	VEP88234M	NON TRK SUB P.C. BOARD	1	(RTL) FOR VEP83444A	P021	VJP2891B016	CONNECTOR (MALE)	1	
■ E5	VEP83452A	F4 SDI MAIN P.C. BOARD	1	(RTL)	P022	VJP1248T	CONNECTOR (MALE) 8P	1	
■ E6	VEP83453A	F5 PB P.C. BOARD	1	(RTL)	P023	VJP2891A030	CONNECTOR (MALE)	1	
■	VEP88234L	PB SUB P.C. BOARD	1	(RTL) FOR VEP83453A	P024	VJP3418A080	CONNECTOR (MALE)	1	
■	VEP88235B	V BLK SUB P.C. BOARD	1	(RTL) FOR VEP83453A	P025	VJP2824B003	CONNECTOR (MALE)	1	
■ E7	VEP83454B	F6 VIDEO OUT P.C. BOARD	1	(RTL)	P026	VJP2824B010	CONNECTOR (MALE)	1	
■ E8	VEP84326C	F7 A PROCESS P.C. BOARD	1	(RTL)	P027	VJP2824B008	CONNECTOR (MALE)	1	
■ E9	VEP84301C	F8 A AD/DA P.C. BOARD	1	(RTL)	P029, 30	VJS3375B060	CONNECTOR (FEMALE)	2	
■ E10	VEP84302B	H1 CUE P.C. BOARD	1	(RTL)	P031	VJP3080	CONNECTOR (MALE)	1	
■ E11-13	VEP85177A	H2/H3/H4 EQUALIZER P.C. BOARD	1	(RTL)	P032	VJP1230T	CONNECTOR (MALE) 3P	1	
■ E14	VEP85174A	HEAD AMP P.C. BOARD	1	(RTL)	P033	VJP3375A060	CONNECTOR (MALE)	1	
■ E15	VEP80991A	A/C HEAD I/F P.C. BOARD	1	(RTL)	P777	VJP1231T	CONNECTOR (MALE) 4P	1	
■ E16	VEP83417B	V/S JACK P.C. BOARD	1	(RTL)			MISCELLANEOUS		
■ E17	VEP81183A	POWER 1 P.C. BOARD	1	(RTL)	VKC0392		SPACER	2	
■ E18	VEP81184A	POWER 2 P.C. BOARD	1	(RTL)	VMP4868		XLR GUIDE ANGLE (B)	1	
■ E19	VEP80A58A	POWER CONNECTION P.C. BOARD	1	(RTL)	VMP5641		MOTHER ANGLE (A)	1	
■ E20	VEP82216B	MECA I/F P.C. BOARD	1	(RTL)	VMP5642		MOTHER ANGLE (B)	1	
■ E21	VEP80856A	CARRIGE P.C. BOARD	1	(RTL)	VMP5643		MOTHER ANGLE (C)	1	
■ E22	VEP84303D	AUD10 JACK P.C. BOARD	1	(RTL)	XYE3+EF8FZ		SCREW	10	
■ E23	VEP84304B	AES/EBU P.C. BOARD	1	(RTL)	XTV26+6F		SCREW	2	
■ E24	VEP83385B	422DA SUB P.C. BOARD	1	(RTL)	XSN26+8FZ		SCREW	8	
■ E25	VEP80A52B	UP FRONT 1 P.C. BOARD	1	(RTL)	XNG26EFXS		NUT	8	
■ E26	VEP80852A	UP FRONT 2 P.C. BOARD	1	(RTL)					
■ E27	VEP86285B	FRONT CPU P.C. BOARD	1	(RTL)	■ E2	VEP82221A	F1 SERVO P.C. BOARD	1	(RTL)
■ E28	VEP86148D	FRONT CPU SUB P.C. BOARD	1	(RTL)	C7	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
■ E29	VEP80A49C	FRONT SW P.C. BOARD	1	(RTL)	C8, C9	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
■ E30	VEP80A99A	FRONT VR 1 P.C. BOARD	1	(RTL)	C10	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1	
■ E31	VEP80B00A	FRONT VR 2 P.C. BOARD	1	(RTL)	C11, 12	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
					C13	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
					C15	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1	
					C30-34	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5	
					C35	ECEV1EV3300	E. CAPACITOR CH 25V 33U	1	
					C36-38	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
					C39	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
					C40, 41	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	2	
					C42-45	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
					C60, 61	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
					C63-74	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	12	
					C80, 81	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
					C82	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C83	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
					C84	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C85, 86	ECEV1EV3300	E. CAPACITOR CH 25V 33U	2	
					C87	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C88	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
					C89, 90	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
					C91	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C92, 93	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	2	
					C94-96	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
					C120, 21	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
					C123	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C124, 25	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	2	
					C126	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
					C127, 28	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	2	
					C129, 30	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
					C131, 32	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
					C133, 34	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	2	
					C135, 36	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
					C160, 61	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2	
					C162	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C163, 64	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	2		C415	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C165	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C416	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C166, 67	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	2		C417	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C168	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C418	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C170, 71	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	2		C419	ECEV1EV220Q	E. CAPACITOR CH 25V 22U	1	
C172	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C420	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C173, 74	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	2		C421	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C175	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C422	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C202, 03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C423	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C204	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C424-27	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C205-07	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		C428, 29	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C211	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C430	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C212, 13	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C431	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C214	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C432-34	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C215, 16	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2		C450	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C218, 19	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C451, 52	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C220	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1		C453, 54	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	2	
C230-32	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	3		C455	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C233-36	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4		C456	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	1	
C237	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C457	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C238	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C458, 59	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C239	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C460	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C240-43	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4		C461	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	1	
C246-51	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6		C462	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C260, 61	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C463	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C263-70	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	8		C464	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C280-84	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5		C465	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C286	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C466	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C300	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C467	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C303	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C468, 69	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C304-07	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4		C470	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C309	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C471	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C322	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		C472	ECUX1C474KBM	C. CAPACITOR CH 16V 0.47U	1	
C323	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C473	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C328	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		C474, 75	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	2	
C329	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C476	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C333	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C477, 78	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	2	
C335, 36	ECUX1H050CCV	C. CAPACITOR CH 50V 5P	2		C479	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C337	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C480	ECEV1HV2R2Q	E. CAPACITOR CH 50V 2.2U	1	
C340	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C481	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C341	ECALXLV101	E. CAPACITOR 25V 100U	1		C482	ECUX1E473KBN	C. CAPACITOR CH 25V 0.047U	1	
C342, 43	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C483	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C344	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		C484	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C345	ECALXLV101	E. CAPACITOR 25V 100U	1		C485	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C346	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C486	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C347, 48	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2		C487	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C349-53	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5		C488	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	1	
C354	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		C489, 90	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C355	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C491	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C356	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1		C492	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1	
C357	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		C493	ECUX1C474KBM	C. CAPACITOR CH 16V 0.47U	1	
C358	ECALXLV101	E. CAPACITOR 25V 100U	1		C510	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C359	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C511	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C360	ECALXLV101	E. CAPACITOR 25V 100U	1		C512, 13	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C361	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C514	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C362	ECALXLV101	E. CAPACITOR 25V 100U	1		C515	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C380, 81	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C516	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C382	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C517-19	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C383	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		C520	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C384	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C521	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C385, 86	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		C522, 23	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	2	
C387	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C524	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C388	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		C525	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C389	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C526	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C390	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C527, 28	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C391	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C529	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C400	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		C530-32	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C401-03	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		C533	ECEV1AV330Q	E. CAPACITOR CH 10V 33U	1	
C404-06	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3		C534	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C407	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C535	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C408	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C536	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C409-11	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3		C537	ECEV1HV010Q	E. CAPACITOR CH 50V 1U	1	
C412	ECUX1C224ZVF	C. CAPACITOR CH 16V 0.22U	1		C538	ECEV1EV330Q	E. CAPACITOR CH 25V 33U	1	
C413	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C539	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C414	ECUX1C105KBM	C. CAPACITOR CH 16V 1U	1		C600, 01	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C660, 61	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	2		IC35	TC7W00F	IC	1	
C662, 63	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC60, 61	MC74HC08AF	IC	2	
C701-04	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	4		IC63-66	NVHC74FT	IC	4	
C705-10	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	6		IC67	MC74HC157AF	IC	1	
C711	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		IC68	T74HC191AF	IC	1	
C712	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		IC69	MC74HC32AF	IC	1	
C713, 14	ECEV1CV1000	E. CAPACITOR CH 16V 10U	2		IC70	MC74HC86AF	IC	1	
C715	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		IC71	MC74HC04AF	IC	1	
C716-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		IC72	NVHC74FT	IC	1	
C721	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		IC73	TVHC11FT	IC	1	
C722	ECUX1H682KBV	C. CAPACITOR CH 50V 6800P	1		IC74	MC74HC27F	IC	1	
C723, 24	ECEV1CV1000	E. CAPACITOR CH 16V 10U	2		IC80, 81	UPC4741G2	IC	2	
C725	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		IC82	NJM2901M	IC	1	
C726-30	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	5		IC83	MC74HC4050F	IC	1	
C738	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC120, 21	UPC4741G2	IC	2	
C740, 41	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2		IC160	NJM2903M	IC	1	
C742, 43	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC161, 62	UPC4741G2	IC	2	
C744	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1		IC200	ADG408BR	IC	1	
C751, 52	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2		IC201	AD7896AR	IC	1	
C827, 28	ECUX1H080CCV	C. CAPACITOR CH 50V 8P	2		IC202	AD7943BR	IC	1	
C829, 30	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC203	SMP08FS	IC	1	
C903, 04	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC204	NVHC244F	IC	1	
C941	ECUX1H123KBV	C. CAPACITOR CH 50V 0.012U	1		IC207	UPC4082G2	IC	1	
C942	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1		IC230	MC68332CFC25	IC	1	
C943, 44	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC231	TL7705CP5B	IC	1	
C946-48	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		IC235	VS12976A	IC	1	
C952-54	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3		IC236, 37	74AC74SJ	IC	2	
D3, 04	MA8075-H	DIODE	2		IC240	74AC08SJ	IC	1	
D30, 31	MA8030	DIODE	2		IC241	MC74HC244AF	IC	1	
D32	MA8047-H	DIODE	1		IC260, 61	Y7C18525SC	IC	2	
D33-35	MA142K	DIODE	3		IC262	IDT71321A55	IC	1	
D80-83	MA147	DIODE	4		IC263, 64	SN74S1051NS	IC	2	
D120-23	MA147	DIODE	4		IC265	NVHC175F	IC	1	
D160-63	MA147	DIODE	4		IC266	NVHC164F	IC	1	
D201	MA142K	DIODE	1		IC267	NVHC273F	IC	1	
D202	MA8047-H	DIODE	1		IC268	MC74HC74AF	IC	1	
D203	MA142K	DIODE	1		IC269	MC74HC86AF	IC	1	
D204, 05	MA8047-H	DIODE	2		IC280	NVHC244F	IC	1	
D206-08	MA142K	DIODE	3		IC282	SLA909SF1G	IC	1	
D300-02	LN1251CAL	DIODE	3		IC300	TE7751	IC	1	
D340	MA728	DIODE	1		IC301, 02	MC74HC244AF	IC	2	
D341	MA736	DIODE	1		IC304, 05	MC74HC244AF	IC	2	
D342	MA728	DIODE	1		IC324	T74VHC04F	IC	1	
D343	MA736	DIODE	1		IC325	74AC74SJ	IC	1	
D344	MA8039-L	DIODE	1		IC340	TL1451CNS	IC	1	
D380	MA728	DIODE	1		IC341	UPC393G2	IC	1	
D381	MA736	DIODE	1		IC342	NJM4580ED	IC	1	
D382	MA728	DIODE	1		IC400, 01	AN3890FBS	IC	2	
D383	MA736	DIODE	1		IC402	NJM4580ED	IC	1	
D400-05	MA738	DIODE	6		IC403	NJM2903M	IC	1	
D406, 07	MA8047-H	DIODE	2		IC404	NJM4580ED	IC	1	
D408-13	MA738	DIODE	6		IC450, 51	AN3834S	IC	2	
D450	MA142K	DIODE	1		IC452	UPC4558G2	IC	1	
D451-56	MA738	DIODE	6		IC510, 11	NJM78L09UA	IC	2	
D457	MA142K	DIODE	1		IC512, 13	NJM79L09UA	IC	2	
D458-63	MA738	DIODE	6		IC514	XC62AP5002P	IC	1	
D510-13	MA701A	DIODE	4		IC515, 16	XC62AP3002P	IC	2	
D514-19	MA704A	DIODE	6		IC517	NJM79L05UA	IC	1	
D701-07	MA142K	DIODE	7		IC600	NJM2903M	IC	1	
D711-14	MA147	DIODE	4		IC660	UPC4741G2	IC	1	
D715	MA142K	DIODE	1		IC701, 02	UPC4741G2	IC	2	
D911	MA147	DIODE	1		IC703	MC14052BF	IC	1	
D913	MA147	DIODE	1		IC704	UPC4082G2	IC	1	
FL320, 21	VLF0576	FILTER	2		IC708	NVHC14F	IC	1	
FL510-15	VLF0576	FILTER	6		IC711	NVHC74FT	IC	1	
IC2	UPC4082G2	IC	1		IC712	MC74HC74AF	IC	1	
IC3	TC4052BF	IC	1		IC713, 14	SC371025AVFU	IC	2	
IC30	UPC4082G2	IC	1		IC715	NVHC157FT	IC	1	
IC31	NJM4580ED	IC	1		IC716	TC7WU04F	IC	1	
IC32	AD633JR	IC	1		IC717	NVHC32FT	IC	1	
IC33	UPC4082G2	IC	1		IC821	MC14053BF	IC	1	
IC34	NVHC74FT	IC	1		IC902	NVHC74FT	IC	1	
					IC903	MC74HC74AF	IC	1	
					IC904	TC7WU04F	IC	1	
					IC910	MC14052BF	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC921	UPC4741G2	IC	1	
IC922	MC14538BF	IC	1	
IS235	VJS2336A040	IC SOCKET	1	
L230, 31	VL00576	COIL	2	
L340	VL00504331K	COIL 330UH	1	
L341	VL00407120W	COIL 12UH	1	
L342	VL00504331K	COIL 330UH	1	
L380	VL00407120W	COIL 12UH	1	
L381, 82	VL00504331K	COIL 330UH	2	
L510	VLP0133	COIL	1	
P1, P2	VJP3454B096	CONNECTOR (MALE)	2	
Q340, 41	2SB1174-0	TRANSISTOR	2	
Q380, 81	2SB1174-0	TRANSISTOR	2	
Q400	PU3210	TRANSISTOR	1	
Q401	PU3110	TRANSISTOR	1	
Q402	PU3210	TRANSISTOR	1	
Q403	PU3110	TRANSISTOR	1	
Q510, 11	2SD601A-R	TRANSISTOR	2	
QR5, R6	UN5213	TRANSISTOR-RESISTOR	2	
QR7, R8	UN5113	TRANSISTOR-RESISTOR	2	
QR30	UN5213	TRANSISTOR-RESISTOR	1	
QR81, 82	UN5213	TRANSISTOR-RESISTOR	2	
QR83	UN5113	TRANSISTOR-RESISTOR	1	
QR84	UN5213	TRANSISTOR-RESISTOR	1	
QR85	UN5113	TRANSISTOR-RESISTOR	1	
QR120	UN5213	TRANSISTOR-RESISTOR	1	
QR121	UN5113	TRANSISTOR-RESISTOR	1	
QR122	UN5213	TRANSISTOR-RESISTOR	1	
QR123	UN5113	TRANSISTOR-RESISTOR	1	
QR124	UN5213	TRANSISTOR-RESISTOR	1	
QR160	UN5213	TRANSISTOR-RESISTOR	1	
QR161	UN5113	TRANSISTOR-RESISTOR	1	
QR162	UN5213	TRANSISTOR-RESISTOR	1	
QR163	UN5113	TRANSISTOR-RESISTOR	1	
QR164	UN5213	TRANSISTOR-RESISTOR	1	
QR340, 41	UN5111	TRANSISTOR-RESISTOR	2	
QR400	UN5213	TRANSISTOR-RESISTOR	1	
QR401	UN5113	TRANSISTOR-RESISTOR	1	
QR600	UN5217	TRANSISTOR-RESISTOR	1	
QR601	UN5211	TRANSISTOR-RESISTOR	1	
QR660	UN5213	TRANSISTOR-RESISTOR	1	
QR701	UN5213	TRANSISTOR-RESISTOR	1	
R12, 13	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R14	ERJ3GEYJ274	M. RESISTOR CH 1/16W 270K	1	
R15	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R16	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R17	ERJ3GEYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R18	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R19, 20	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R21	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R32	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R33	ERJ3RBD122	M. RESISTOR CH 1/16W 1.2K	1	
R34	ERJ3RBD563	M. RESISTOR CH 1/16W 56K	1	
R35	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R36	ERJ3RBD562	M. RESISTOR CH 1/10W 5.6K	1	
R37	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R38, 39	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	2	
R40	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R41	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R42	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	
R43-45	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R48	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R49	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R50	ERJ3RBD471	M. RESISTOR CH 1/16W 470	1	
R51	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R52	ERJ3RBD471	M. RESISTOR CH 1/16W 470	1	
R53	ERJ3RBD823	M. RESISTOR CH 1/16W 82K	1	
R54	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R55	ERJ3GEYJ682	M. RESISTOR CH 1/16W 6.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R56-58	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R59	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R60	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R61-66	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	6	
R69-77	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	9	
R80, 81	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R82, 83	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R84	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R85	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R86	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R87, 88	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R89, 90	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R91, 92	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	2	
R93	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R94	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R95	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R96	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R97	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R98, 99	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R100, 01	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R102, 03	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R104	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R105	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R106	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R107	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R108	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R109	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R120, 21	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R122, 23	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R124	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R125	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R126	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R127	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R128, 29	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R130, 31	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R132, 33	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	2	
R134	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R135	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R136	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R137	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R138	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R139, 40	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R141, 42	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R143, 44	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R145	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R146	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R147	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R148	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R149	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R160, 61	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R162, 63	ERJ3RBD223	M. RESISTOR CH 1/16W 22K	2	
R164	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R165	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R166	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R167	ERJ3GEYJ474	M. RESISTOR CH 1/16W 470K	1	
R168, 69	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R170, 71	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R172	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R173	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R174	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R175	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R176	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R177, 78	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	2	
R179, 80	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R181, 82	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R183, 84	ERJ3RED224	M. RESISTOR CH 1/16W 220K	2	
R185	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R186	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R187	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R188	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R189	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R203	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R204, 05	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	2	
R206	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R214	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R215, 16	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2		R410	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R217, 18	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R411	ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	1	
R222	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R412	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R234	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R413	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R235-43	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	9		R414, 15	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	2	
R244	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R416	ERJ3GEYJ621	M.RESISTOR CH 1/16W 620	1	
R245	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R417	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R246	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R418	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R247	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R420	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R248-51	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	4		R421	ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	1	
R259, 60	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R422	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R261	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R423	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R262	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R424, 25	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R263, 64	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2		R426	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R265	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R427	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R266	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		R428, 29	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	2	
R267-69	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3		R430, 31	ERJ12YJR68	M.RESISTOR CH 1/2W 0.68	2	
R270	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R432, 33	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R275-78	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	4		R436, 37	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R280	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R450	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R281, 82	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	2		R451	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R283-85	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3		R452	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R300	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R453-55	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	3	
R301	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R456, 57	ERJ12YJ2R2	M.RESISTOR CH 1/2W 2.2	2	
R305	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R458	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R314-16	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3		R459	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R318, 19	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2		R460	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R330	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R461	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R331	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1		R462	ERJ3RBD122	M.RESISTOR CH 1/16W 1.2K	1	
R332	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R463	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R340	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1		R464, 65	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	2	
R341	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R466, 67	ERJ12YJ2R2	M.RESISTOR CH 1/2W 2.2	2	
R342	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R468	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R343	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1		R469	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R344	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		R470	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R345	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1		R471	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R346	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R510	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R347	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		R511, 12	ERJ3RBD391	M.RESISTOR CH 1/16W 390	2	
R348	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R513	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R349	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R514-17	ERJ3RBD391	M.RESISTOR CH 1/16W 390	4	
R350	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R550-59	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	10	
R351-53	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R600	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R354	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R601, 02	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R355	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R603	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R356	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R605, 06	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R357	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R621	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R358	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1		R622-27	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	6	
R359	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R628	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R360	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R631, 32	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R361	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R640	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R362, 63	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2		R650, 51	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R364	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R652	ERJ3RBD682	M.RESISTOR CH 1/16W 6.8K	1	
R365	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1		R653	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R366	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R654	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R367	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R655	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R368	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R656	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R369	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1		R660	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R370	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R661, 62	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R371	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1		R663, 64	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R372	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R666	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R373	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		R667-72	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	6	
R374, 75	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R673	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R380	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R674	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R381	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		R675-81	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	7	
R382	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R701-04	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	4	
R383	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R705-14	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	10	
R384	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		R715-17	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	3	
R385	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R718	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R400, 01	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	2		R719	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R402	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1		R720	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R403	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1		R722-24	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R404, 05	ERJ12YJR68	M.RESISTOR CH 1/2W 0.68	2		R726	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R406, 07	ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	2		R727	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R408	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R728, 29	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R409	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1		R730, 31	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C543-45	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	3		D49, 50	SN74S1051NS	IC	2	
C547	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		D51	MA3062-L	DIODE	1	
C548	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		D52	MA3082M	DIODE	1	
C549, 50	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		D53	MA3075-M	DIODE	1	
C551	ECUM1H331JCN	C. CAPACITOR CH 50V 330P	1		D54	MA738	DIODE	1	
C552-55	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4		D55	MA152WK	DIODE	1	
C560, 61	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		D56	MA3030-H	DIODE	1	
C703-13	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	11		D500	MA152WK	DIODE	1	
C714	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		D503	MA152WK	DIODE	1	
C715, 16	ECUM1H080DCN	C. CAPACITOR CH 50V 8P	2		D504, 05	MA715	DIODE	2	
C717-21	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5		D506	MA152WK	DIODE	1	
C722, 23	ECUM1H050CCN	C. CAPACITOR CH 50V 5P	2		D507	MA715	DIODE	1	
C724, 25	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		D508	MA152WK	DIODE	1	
C728	ECEVOJV4700	E. CAPACITOR CH 6.3V 47U	1		D701-06	MA715	DIODE	6	
C729	ECUX1H102JCN	C. CAPACITOR CH 50V 1000P	1		D709	MA715	DIODE	1	
C730	ECUX1H682KBN	C. CAPACITOR CH 50V 6800P	1		D711-14	MA157	DIODE	4	
C731	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		D715	MA152WK	DIODE	1	
C732	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		D720-22	SN74S1051NS	IC	3	
C733, 34	ECEV1EN4R70	E. CAPACITOR CH 25V 4.7U	2		D723-27	MA715	DIODE	5	
C735	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1						
C736	ECATCAXN330	E. CAPACITOR 16V 33U	1		FL701, 02	VLF0576	FILTER	2	
C737	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		FL900-03	VLF0576	FILTER	4	
C738	ECATCAXN330	E. CAPACITOR 16V 33U	1						
C739, 40	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		IC1	M37702S4AFP	IC	1	
C741	ECEV1EN4R70	E. CAPACITOR CH 25V 4.7U	1		IC2	VS12972A	IC	1	
C742	ECUM1H120JCN	C. CAPACITOR CH 50V 12P	1		IC3	74F573SJ	IC	1	
C743	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		IC4	74F138SJ	IC	1	
C744, 45	ECEV1EN4R70	E. CAPACITOR CH 25V 4.7U	2		IC5	74F573SJ	IC	1	
C746	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC6	TL7705CPSB	IC	1	
C747-56	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	10		IC7	MC74HC132AF	IC	1	
C758-61	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		IC8	MC74HC04AF	IC	1	
C762	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC9, 10	74AC32SJ	IC	2	
C763	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC11, 12	74F32SJ	IC	2	
C764	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC13	MC74HC74AF	IC	1	
C765	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC14	74F11SJ	IC	1	
C766	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC15	IDT71321A55	IC	1	
C767	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC16	74F245SJ	IC	1	
C768	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC17	STK14C88N45	IC	1	
C769	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC19, 20	74F541SJ	IC	2	
C770	ECUX1H561JCN	C. CAPACITOR CH 50V 560P	1		IC23	74F245SJ	IC	1	
C771	ECUM1H821JCN	C. CAPACITOR CH 50V 820P	1		IC26	TE7751	IC	1	
C772, 73	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		IC27, 28	M54649L	IC	2	
C774	ECEV1EN4R70	E. CAPACITOR CH 25V 4.7U	1		IC29	NJM2901M	IC	1	
C775	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC30	NJM2904M	IC	1	
C776	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC31, 32	MC14538BF	IC	2	
C777-80	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		IC33	74F32SJ	IC	1	
C781, 82	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		IC34	74F00SJ	IC	1	
C783	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC35	NJM2901M	IC	1	
C784	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC36, 37	TC7S14F	IC	2	
C785	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC38	MC14538BF	IC	1	
C800-03	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	4		IC39	NJM2904M	IC	1	
C804-09	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	6		IC500	HD64180ZRP10	IC	1	
C811, 12	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		IC501, 02	MC74HC541AF	IC	2	
C900, 01	ECEV1CV4700	E. CAPACITOR CH 16V 47U	2		IC503	VS12973A	IC	1	
C902, 03	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		IC504	K6256DLG7L	IC	1	
C904-07	ECEV1CV4700	E. CAPACITOR CH 16V 47U	4		IC505	IDT71321A55	IC	1	
C908-11	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4		IC506	MC74HC138AF	IC	1	
					IC507	74F32SJ	IC	1	
D1	MA157	DIODE	1		IC508	MC74HC00AF	IC	1	
D2-D5	MA715	DIODE	4		IC509	T74HC191AF	IC	1	
D8	MA152WK	DIODE	1		IC510	Z84C4310FEC	IC	1	
D9	MA3068-H	DIODE	1		IC511, 12	MC74HC126AF	IC	2	
D10	MA3051-H	DIODE	1		IC513, 14	SN75C1168NS	IC	2	
D11	MA3047-M	DIODE	1		IC515	MC1488M	IC	1	
D12	MA3100-M	DIODE	1		IC516	MC1489AM	IC	1	
D13	MA3051-H	DIODE	1		IC517	MC14024BF	IC	1	
D14	MA3075-M	DIODE	1		IC518	TE7751	IC	1	
D15	21DQ04	DIODE	1		IC519, 20	MC14021BF	IC	2	
D16	MA3051-H	DIODE	1		IC521, 22	MC14094BF	IC	2	
D17	MA157	DIODE	1		IC523	MC74HC04AF	IC	1	
D18-22	MA152WK	DIODE	5		IC524	MC14050BF	IC	1	
D25-27	MA152WK	DIODE	3		IC525	SN74LS38NS	IC	1	
D28-43	MA738	DIODE	16		IC527	TE7751	IC	1	
D44	MA152WK	DIODE	1		IC528, 29	MC14021BF	IC	2	
D45-48	NSQ03A04	DIODE	4		IC530, 31	T74HC191AF	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC532	MC74HC574AF	IC	1		QR3-10	UN2213	TRANSISTOR-RESISTOR	8	
IC534, 35	MC14021BF	IC	2		QR11-16	UN2214	TRANSISTOR-RESISTOR	6	
IC536	MC14050BF	IC	1		QR17	UN2213	TRANSISTOR-RESISTOR	1	
IC541	MC74HC00AF	IC	1		QR18-26	UN2214	TRANSISTOR-RESISTOR	9	
IC701	M37702S4AFP	IC	1		QR27, 28	UN2113	TRANSISTOR-RESISTOR	2	
IC702	VS12974A	IC	1		QR29, 30	UN2214	TRANSISTOR-RESISTOR	2	
IC703	K6256DL67L	IC	1		QR31, 32	UN2113	TRANSISTOR-RESISTOR	2	
IC704	74F573SJ	IC	1		QR33, 34	UN2214	TRANSISTOR-RESISTOR	2	
IC705, 06	74F138SJ	IC	2		QR35, 36	UN2113	TRANSISTOR-RESISTOR	2	
IC707, 08	74F32SJ	IC	2		QR37, 38	UN2213	TRANSISTOR-RESISTOR	2	
IC709	74F00SJ	IC	1		QR39, 40	UN2113	TRANSISTOR-RESISTOR	2	
IC710	MN51040VPI	IC	1		QR41	UN2213	TRANSISTOR-RESISTOR	1	
IC711	MC74HC574AF	IC	1		QR43	UN2213	TRANSISTOR-RESISTOR	1	
IC712	74AC32SJ	IC	1		QR44	UN2214	TRANSISTOR-RESISTOR	1	
IC714, 15	74F541SJ	IC	2		QR45	UN2213	TRANSISTOR-RESISTOR	1	
IC716	74F245SJ	IC	1						
IC717	74F541SJ	IC	1		R1-R5	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	5	
IC718	MC14053BF	IC	1		R6-10	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	5	
IC719	NJM4560MD	IC	1		R11, 12	ERJ6GEYF822	M. RESISTOR CH 1/10W 8.2K	2	
IC720	NJM2068MD	IC	1		R13, 14	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
IC721	UPC319G2	IC	1		R16	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
IC722	UPC4741G2	IC	1		R17	ERJ6GEYG394	M. RESISTOR CH 1/10W 390K	1	
IC723	NJM78L09UA	IC	1		R18, 19	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
IC724	NJM79L09UA	IC	1		R20	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC725, 26	NJM084M	IC	2		R21, 22	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
IC727	MC74HC004AF	IC	1		R23, 24	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
IC728, 29	74F74SJ	IC	2		R25, 26	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
IC730	74F32SJ	IC	1		R27, 28	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
IC731	74F245SJ	IC	1		R29	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC732	74F08SJ	IC	1		R33-35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
IC733	MC14053BF	IC	1		R38, 39	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
IC734	NJM084M	IC	1		R43	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	1	
					R44	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
IS2	VJS2336A032	IC SOCKET	1		R45	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IS503	VJS2336A032	IC SOCKET	1		R46	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
IS702	VJS2336A032	IC SOCKET	1		R47	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
					R48	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
L2	VL00319K470	COIL 47UH	1		R49	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
L500-03	VL00576	COIL	4		R54, 55	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
L701	VL00163J470	COIL 47UH	1		R56	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
L900-03	VLP0133	COIL	4		R57	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
					R58-61	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	4	
LED1-D4	LN1251CAL	DIODE	4		R62	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
					R63-70	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	8	
P1, P2	VJP3454B096	CONNECTOR (MALE)	2		R76	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
					R82	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
Q3	2SB710A-R	TRANSISTOR	1		R83	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
Q4	2SB936A-Q	TRANSISTOR	1		R84-88	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	5	
Q5, Q6	2SD601A-R	TRANSISTOR	2		R90-95	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	6	
Q7, Q8	2SB1073-R	TRANSISTOR	2		R96	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
Q9	2SD601A-R	TRANSISTOR	1		R97	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
Q10	2SB709A-R	TRANSISTOR	1		R100	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
Q11, 12	2SD1119-R	TRANSISTOR	2		R101, 02	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
Q13	2SB709A-R	TRANSISTOR	1		R103, 04	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
Q14	2SD601A-R	TRANSISTOR	1		R105	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
Q15, 16	2SB1073-R	TRANSISTOR	2		R106	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
Q17	2SD601A-R	TRANSISTOR	1		R108	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
Q18	2SB709A-R	TRANSISTOR	1		R109, 10	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
Q19, 20	2SD1119-R	TRANSISTOR	2		R111, 12	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
Q21	2SB709A-R	TRANSISTOR	1		R113	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
Q22	2SD601A-R	TRANSISTOR	1		R114	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
Q23, 24	2SB1175	TRANSISTOR	2		R116	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
Q25	2SD601A-R	TRANSISTOR	1		R117, 18	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
Q26	2SB709A-R	TRANSISTOR	1		R119, 20	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
Q27, 28	2SD1747POY	TRANSISTOR	2		R121	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
Q29	2SB709A-R	TRANSISTOR	1		R122	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
Q30	2SD601A-R	TRANSISTOR	1		R124	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
Q31, 32	2SB1073-R	TRANSISTOR	2		R125, 26	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
Q33	2SD601A-R	TRANSISTOR	1		R127, 28	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
Q34	2SB709A-R	TRANSISTOR	1		R129-37	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	9	
Q35, 36	2SD1119-R	TRANSISTOR	2		R138, 39	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
Q37	2SB709A-R	TRANSISTOR	1		R141, 42	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
Q38	2SD601A-R	TRANSISTOR	1		R144	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
Q39	2SB936A-Q	TRANSISTOR	1		R145-47	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	3	
Q704, 05	2SB709A-R	TRANSISTOR	2						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R150	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R263	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R152	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1		R266-69	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4	
R153	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1		R271	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R154	ERX1SJ1R0	M.RESISTOR 1W 1.0	1		R273	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R155	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R275	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R156	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R277	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R157	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1		R281	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R158	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1		R284, 85	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R159	ERG1SJ220	M.RESISTOR 1W 22	1		R288	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R160	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R290	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R161	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1		R291	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R162, 63	ERJ8GCGY151	M.RESISTOR CH 1/8W 150	2		R292, 93	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R164, 65	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2		R294	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R166	ERJ8GCGY152	M.RESISTOR CH 1/8W 1.5K	1		R295	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R167-69	ERJ8GCGY681	M.RESISTOR CH 1/8W 680	3		R296	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R170	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R297	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R171	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1		R298	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R172, 73	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2		R299	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R174-81	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8		R304-15	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	12	
R182	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1		R316, 17	ERG1SJ100	M.RESISTOR 1W 10	2	
R184	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R318	ERX1SJ6R2	M.RESISTOR 1W 6.2	1	
R185	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R319	ERG1SJ100	M.RESISTOR 1W 10	1	
R186	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R320	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R187-90	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	4		R321-28	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	8	
R191	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R329, 30	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R192	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R332	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R193, 94	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R333	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R195	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R334	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R196, 97	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R337-39	ERJ8GCGY681	M.RESISTOR CH 1/8W 680	3	
R198	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R341	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R199, 00	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R342	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R201	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R345	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R202	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R346	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R203, 04	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2		R348	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R205	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R349-62	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	14	
R206	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R365	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R207, 08	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R366	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R209	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R367	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R210, 11	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R370, 71	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R212	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R380	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R213, 14	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R381	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R215	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R382	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R216, 17	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R383-85	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	3	
R218	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R387	ERJ8GCGY152	M.RESISTOR CH 1/8W 1.5K	1	
R219, 20	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R388, 89	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R221	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R392	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R222	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R400, 01	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R223, 24	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2		R402	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R225	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R403-05	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R226	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1		R411	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R227, 28	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R413	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R229	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1		R500	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R230, 31	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R501	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R232	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R502, 03	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R233, 34	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R504-11	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R235	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R512	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R236, 37	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R513-15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R238	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1		R516, 17	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R239, 40	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R518, 19	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R241	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1		R520	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R242	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R521	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R243, 44	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2		R523, 24	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R245	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R525	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R246	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R527	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R247, 48	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R528-31	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R249	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R532, 33	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R250, 51	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R534	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R252	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R535, 36	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R253, 54	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R537	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R255	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R542	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R256, 57	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R543	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R258	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R544	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R259, 60	ERJ8GCGY391	M.RESISTOR CH 1/8W 390	2		R545	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R261	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1		R546	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R262	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R547-49	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R550, 51	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R803, 04	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	2	
R554-58	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5		R805-08	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	4	
R562-65	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4		R809	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R580	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1		R810	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R585	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R811, 12	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R590-94	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5		R813	ERJ6GEYG824	M.RESISTOR CH 1/10W 820K	1	
R598	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R814	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R599	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R816-39	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	24	
R606, 07	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2		R840-47	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R608	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1		R855, 56	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R609	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1		R858, 59	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R610-17	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8		R860-62	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R629	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R863, 64	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R632	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R865	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R634	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R866	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R636	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R867	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R638, 39	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2		R868	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R641	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1		R869	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R642	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1		R870	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R665	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R871, 72	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R705-10	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	6		R873	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R711-16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	6		R874, 75	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R717	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R876	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R718, 19	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2		R877, 78	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R723	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R879, 80	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R725	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R881	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R726	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R882, 83	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R728	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R884	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R729-31	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3		R885	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R732-34	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3		R886	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R735	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R887, 88	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R736	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R890	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R737	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R900-03	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4	
R738	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1		R910	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R739, 40	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R913	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R741, 42	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2		R917	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R743, 44	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2		R919	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R745, 46	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2		R920	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R747	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R921	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R748	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R924	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R749, 50	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R925	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R751	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R928	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R754	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R929	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R755	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R930-32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R757-59	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	3		R934	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R762	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R936	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R764, 65	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2		R937-39	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	3	
R766	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R942, 43	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R767-69	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3		R946	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R770	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1		R948	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R771	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R950	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R772	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R951	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R773	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R952	ERJ6GEYG184	M.RESISTOR CH 1/10W 180K	1	
R774	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1		R953	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R775, 76	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2		R954	ERJ6GEYG184	M.RESISTOR CH 1/10W 180K	1	
R777	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1		R955	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R778-81	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	4		R957	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R782	ERJ6RED470	M.RESISTOR CH 1/10W 47	1		R958	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R783	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1		R960	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R784	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R961-68	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R785	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1		R979-84	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	6	
R786	ERJ6RED820	M.RESISTOR CH 1/10W 82	1		R985	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R787	ERJ6RED470	M.RESISTOR CH 1/10W 47	1		R990, 91	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R788	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1		R992	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R789	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R993	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R790	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R995, 96	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R791	ERJ6RBD683	M.RESISTOR CH 1/10W 68K	1		R997	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R792	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1		R998	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R793	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1		R1000, 01	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R794, 95	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2		R1002	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R796	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R1003	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R797, 98	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	2		R1005, 06	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R799	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R1007	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R800, 01	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2		R1008	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R802	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R1010, 11	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1012	ERJ6GEY0105	M.RESISTOR CH 1/10W 1M	1		C3881-87	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	7	
R1013	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		C3888, 89	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
R1015, 16	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2		C3890	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
R1017	ERJ6GEY0105	M.RESISTOR CH 1/10W 1M	1		C3891	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
R1018	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		C3892	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
R1020, 21	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2		C3893	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
SW501	VSS0367-08B	SWITCH	1		C3931-33	ECEVICV1000	E.CAPACITOR CH 16V 10U	3	
TG1	EYF6CU	TEST POINT	1		C3934-36	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
TG701	EYF6CU	TEST POINT	1		C3937-42	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	6	
TP8	EYF6CU	TEST POINT	1		C3943-51	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9	
TP13, 14	EYF6CU	TEST POINT	2		C3971-76	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
X1	VXS0641	CRYSTAL OSCILLATOR	1		C3984	ECEVICV1000	E.CAPACITOR CH 16V 10U	1	
X500	VXS0641	CRYSTAL OSCILLATOR	1		C3985, 86	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
X701	VXS0654	CRYSTAL OSCILLATOR	1		C3987, 88	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	2	
X702	VXS1001	CRYSTAL OSCILLATOR	1		C3989, 90	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
		MISCELLANEOUS			C3991, 92	ECEVICV1000	E.CAPACITOR CH 16V 10U	2	
	VML2143	CARD PULLER	1		D3741	LN1251CAL	DIODE	1	
	VML2144	CARD PULLER	1		D3841, 42	LN1251CAL	DIODE	2	
					D3931-33	MA715	DIODE	3	
					D3981	MA701A	DIODE	1	
					D3983	MA701A	DIODE	1	
					D3985	MA701A	DIODE	1	
					IC1	M31020EAVP	IC	1	FOR VEP88234M BLANK ROM
					ID1	VVVS12978A		1	SOFTWARE
					IC3041-43	MC10H125M	IC	3	
					IC3044-46	TLCX125F	IC	3	
					IC3047-49	74F125SJ	IC	3	
					IC3161	M65501FP	IC	1	
					IC3201	M65501FP	IC	1	
					IC3241	M65501FP	IC	1	
					IC3281	M65501FP	IC	1	
					IC3321	M65501FP	IC	1	
					IC3361	M65501FP	IC	1	
					IC3401	M4128-6410VC	IC	1	BLANK ROM
					ID3401	VVVS13030B		1	SOFTWARE
					IC3402	UPD42280G3	IC	1	
					IC3421	M4128-6410VC	IC	1	BLANK ROM
					ID3421	VVVS13030B		1	SOFTWARE
					IC3422	UPD42280G3	IC	1	
					IC3441	M4128-6410VC	IC	1	BLANK ROM
					ID3441	VVVS13030B		1	SOFTWARE
					IC3442	UPD42280G3	IC	1	
					IC3461	M4128-6410VC	IC	1	BLANK ROM
					ID3461	VVVS13030B		1	SOFTWARE
					IC3462	UPD42280G3	IC	1	
					IC3481	M4128-6410VC	IC	1	BLANK ROM
					ID3481	VVVS13030B		1	SOFTWARE
					IC3482	UPD42280G3	IC	1	
					IC3501	M4128-6410VC	IC	1	BLANK ROM
					ID3501	VVVS13030B		1	SOFTWARE
					IC3502	UPD42280G3	IC	1	
					IC3521, 22	MB81V4260S7	IC	2	
					IC3523	EPF10K50VRC4	IC	1	
					IC3524	VS13031A	IC	1	
					IC3525, 26	MB81V4260S7	IC	2	
					IC3527	S80726ANDP	IC	1	
					IC3571, 72	NVHC244F	IC	2	
					IC3573	74ALS541SJ	IC	1	
					IC3574	SN74LS244NS	IC	1	
					IC3575	74ALS541SJ	IC	1	
					IC3621	NVHC153F	IC	1	
					IC3622, 23	NVHC244F	IC	2	
					IC3624, 25	TVHT244F	IC	2	
					IC3641	UPD42280G3	IC	1	
					IC3642	M4128-6410VC	IC	1	BLANK ROM
					ID3642	VVVS13030B		1	SOFTWARE
					IC3651	UPD42280G3	IC	1	
					IC3652	M4128-6410VC	IC	1	BLANK ROM
					ID3652	VVVS13030B		1	SOFTWARE
					IC3681	MC10H124M	IC	1	
					IC3701	M4128-6410VC	IC	1	BLANK ROM
					ID3701	VVVS13030B		1	SOFTWARE
					IC3702	NVHC244F	IC	1	
C1-C4	ECUX1E104ZFY	C.CAPACITOR CH 25V 0.1U	4	FOR VEP88234M					
C3041-49	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3050-61	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12						
C3062-67	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6						
C3161-69	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3201-09	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3241-49	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3281-89	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3321-29	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3361-69	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9						
C3401-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3407	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3421-25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3427	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3441-45	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3447	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3461-65	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3467	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3481-85	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3487	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3501-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3507	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3521-28	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8						
C3529	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1						
C3530-36	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	7						
C3571-76	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6						
C3621-25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3641-46	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6						
C3651-56	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6						
C3681, 82	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2						
C3701-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3741	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1						
C3742, 43	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2						
C3745	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1						
C3771-93	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	23						
C3801-04	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4						
C3811	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1						
C3821-25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5						
C3841	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1						
C3842-49	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8						
C3850	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1						
C3851, 52	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3741	NVHC244F	IC	1		R3251-54	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
IC3771	NVHC138F	IC	1		R3256	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3772	NVHC244F	IC	1		R3259, 60	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2	
IC3773, 74	TVHT573F	IC	2		R3261-75	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15	
IC3775	NVHC32F	IC	1		R3281-85	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
IC3776, 77	NVHC245F	IC	2		R3286-90	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5	
IC3778	T74LCX245F	IC	1		R3291-94	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
IC3779	NVHC32F	IC	1		R3296	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3780-83	NVHC245F	IC	4		R3299, 00	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2	
IC3784	NVHC32F	IC	1		R3301-15	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15	
IC3785-88	NVHC245F	IC	4		R3321-25	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
IC3789	NVHC32F	IC	1		R3326-30	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5	
IC3790-93	NVHC245F	IC	4		R3331-34	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
IC3801	NVHC08F	IC	1		R3336	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3802	1DT71321L55F	IC	1		R3339, 40	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2	
IC3803	NVHC00F	IC	1		R3341-55	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15	
IC3804	TVHT244F	IC	1		R3361-65	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
IC3811	1DT71321L55F	IC	1		R3366-70	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5	
IC3821, 22	SN74S1051NS	IC	2		R3371-74	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
IC3823, 24	74F541SJ	IC	2		R3376	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3825	74F245SJ	IC	1		R3379, 80	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2	
IC3841, 42	SN74S1051NS	IC	2		R3381-95	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15	
IC3843, 44	74F541SJ	IC	2		R3401	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
IC3845	74F245SJ	IC	1		R3402	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3846	74AC138SJ	IC	1		R3403	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
IC3847	NVHC244F	IC	1		R3404, 05	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
IC3848	UPD71055GB	IC	1		R3421	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
IC3850	74F04SJ	IC	1		R3422	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3851	74F32SJ	IC	1		R3423	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
IC3881	MC10H125M	IC	1		R3424, 25	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
IC3882	NVHU04F	IC	1		R3441	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
IC3883-85	T74LCX244F	IC	3		R3442	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3931-36	NJM2904M	IC	6		R3443	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
IC3937-39	NJM2903M	IC	3		R3444, 45	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
IC3971	M4128-6410VC	IC	1		R3461	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
IC3972, 73	T74LCX245F	IC	2		R3462	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
IC3983	LT1086CM	IC	1		R3463	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R3464, 65	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
IS3524	VJS3096308	IC SOCKET	1		R3481	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
L3931	VL00319K470	COIL 47UH	1		R3482	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
L3981-83	VLFI151A132	COIL 1300UH	3		R3483	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
P1	VJP4106A120L	CONNECTOR	1	FOR VEP88234M	R3484, 85	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
P3001, 02	VJP3454B096	CONNECTOR (MALE)	2		R3501	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
P3571	VJP3125D008	CONNECTOR (MALE)	1		R3502	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
P3741	VJS4106A120L	CONNECTOR	1		R3503	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R3504, 05	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
QR3841, 42	MUN2214	TRANSISTOR-RESISTOR	2		R3521-36	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	16	
					R3538	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3001-31	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	31		R3539-41	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R3043-46	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4		R3542	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3051-54	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4		R3543	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3059-62	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4		R3544-51	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R3065-88	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	24		R3552-67	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	16	
R3089-00	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	12		R3568	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3105	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R3571	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3110	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R3572	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3115	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R3573-89	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	17	
R3116-39	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	24		R3590, 91	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R3140-49	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	10		R3592	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3161-65	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5		R3593	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3166-70	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5		R3594, 95	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R3171-74	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4		R3596	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3176	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R3598-00	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	3	
R3179, 80	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2		R3601, 02	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R3181-95	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15		R3603-06	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R3201-05	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5		R3607-10	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	4	
R3206-10	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5		R3611	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R3211-14	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4		R3621-25	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5	
R3216	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1		R3627-30	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	4	
R3219, 20	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	2		R3631-34	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R3221-35	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	15		R3641	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R3241-45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5		R3642	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R3246-50	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5		R3643	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
					R3644, 45	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
					R3646	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3651	ERJ6GEYG680	M. RESISTOR CH 1/10W 68	1	
R3652	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R3653	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3654, 55	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R3656	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	1	
R3661	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3681	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3682	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3683	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3684	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3685	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3686	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3687	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3688	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3689	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3690	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3691	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3692	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3693	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3694	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3695	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3696	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3709-16	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	8	
R3717	ERJ6GEYG680	M. RESISTOR CH 1/10W 68	1	
R3718	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3719, 20	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	2	
R3721	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3722, 23	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R3724	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	1	
R3725	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3726	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	1	
R3727	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3728, 29	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	2	
R3730	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3731	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	1	
R3732	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3733	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	1	
R3734	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3735	ERJ6GEYG203	M. RESISTOR CH 1/10W 20K	1	
R3742	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3743	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3746	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3747, 48	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R3749, 50	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	2	
R3751	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R3752	ERJ6GEYG821	M. RESISTOR CH 1/10W 820	1	
R3754	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3755-59	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	5	
R3760	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3761	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R3762-64	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	3	
R3771-73	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	3	
R3774	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3775	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3777	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3779	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3780-92	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	13	
R3801-04	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
R3805-08	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	4	
R3809	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3811-14	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
R3821, 22	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R3823-33	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	11	
R3841, 42	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R3843-47	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	5	
R3848	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3849-52	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	4	
R3853-60	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	8	
R3861, 62	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R3863	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R3864	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3865	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R3866	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3867	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3869, 70	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3871	ERJ6GEYG821	M. RESISTOR CH 1/10W 820	1	
R3872	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3873	ERJ6GEYG821	M. RESISTOR CH 1/10W 820	1	
R3874	ERDS2TJ473	C. RESISTOR 1/4W 47K	1	
R3881, 82	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R3883-86	ERJ6GEYG560	M. RESISTOR CH 1/10W 56	4	
R3887	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R3888	ERJ6GEYJ431	M. RESISTOR CH 1/10W 430	1	
R3889, 90	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
R3892, 93	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R3894-96	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	3	
R3897-11	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	15	
R3913-18	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	6	
R3931-36	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	6	
R3937	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3938	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3939	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3940	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3941	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3942	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3943	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3944	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3945	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3946	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3947	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R3948	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3949-54	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	6	
R3955-60	ERJ6GEYJ274	M. RESISTOR CH 1/10W 270K	6	
R3961-63	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R3964-69	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	6	
R3971	ERJ6GEYG680	M. RESISTOR CH 1/10W 68	1	
R3972	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R3973, 74	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R3976	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3978	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R3988	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	1	
R3989	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
R3993	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	1	
TG3401	EYF6CU	TEST POINT	1	
TG3521	EYF6CU	TEST POINT	1	
TG3741	EYF6CU	TEST POINT	1	
TP3401	EYF6CU	TEST POINT	1	
TP3421	EYF6CU	TEST POINT	1	
TP3441	EYF6CU	TEST POINT	1	
TP3461	EYF6CU	TEST POINT	1	
TP3481	EYF6CU	TEST POINT	1	
TP3501	EYF6CU	TEST POINT	1	
TP3522-24	EYF6CU	TEST POINT	3	
TP3539	EYF6CU	TEST POINT	1	
TP3543, 44	EYF6CU	TEST POINT	2	
TP3548	EYF6CU	TEST POINT	1	
TP3557-59	EYF6CU	TEST POINT	3	
TP3714, 15	EYF6CU	TEST POINT	2	
TP3742	EYF6CU	TEST POINT	1	
X3881	VSX0974	CRYSTAL OSCILLATOR	1	
X3882	VSX0970	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VMS6278	POST	2	FOR VEP88234M
	XYN3+K5	SCREW	2	FOR VEP88234M
	XWA3B	WASHER	2	FOR VEP88234M
	XNG3BS	NUT	2	FOR VEP88234M
E5	VEP83452A	F4 SDI MAIN P.C. BOARD	1	(RTL)
C1	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC643	AN7805F	IC	1	
C5	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC751-53	74ALS541SJ	IC	3	
C6	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC754	SN74S1051NS	IC	1	
C7	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC755	74ALS245ASJ	IC	1	
C8, C9	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		IC756	SN74S1051NS	IC	1	
C11	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC758, 59	UPD71055GB	IC	2	
C13	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC760	74F04SJ	IC	1	
C14	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		IC801	M4128-6410VC	IC	1	BLANK ROM
C15	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		ID801	VVVS13005A		1	SOFTWARE
C295-98	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4						
C302	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		L1	VLFI151A132	COIL	1	
C304-08	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5		L3-L5	VLFI151A132	COIL	3	
C310, 11	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		L7	VLFI151A132	COIL	1	
C445	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		L591, 92	VL00319K100	COIL 10UH	2	
C501-11	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	11		L641	VL00319K100	COIL 10UH	1	
C512	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1						
C531-35	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5		P1, P2	VJP3510	CONNECTOR (MALE)	2	
C537	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		P3	VJP1231T	CONNECTOR (MALE) 4P	1	
C561-64	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		P4	VJP3125D008	CONNECTOR (MALE)	1	
C591-94	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		P5, P6	VJP3635A080	CONNECTOR (MALE)	2	
C595	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	1		P591-93	VJP4131	CONNECTOR (MALE)	3	
C596-99	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		P641	VJP4131	CONNECTOR (MALE)	1	
C600, 01	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	2						
C602, 03	ECUM1H100DCN	C. CAPACITOR CH 50V 10P	2		QR751	MJN2212	TRANSISTOR-RESISTOR	1	
C604, 05	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2						
C606	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		R1	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
C607	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R7-10	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	4	
C608	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		R16	ERJ6GEYG680	M. RESISTOR CH 1/10W 68	1	
C609	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R17	ERDS2TJ182	C. RESISTOR 1/4W 1.8K	1	
C610-13	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	4		R235	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
C614, 15	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		R294	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
C616, 17	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2		R295-02	ERJ6GEYG560	M. RESISTOR CH 1/10W 56	8	
C619-21	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	3		R303-06	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	4	
C623-25	ECUX1H020CCN	C. CAPACITOR CH 50V 2P	3		R309	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
C626	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R317-23	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	7	
C641, 42	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		R325, 26	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	2	
C644	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R327, 28	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	2	
C645-47	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	3		R400	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
C648	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R442	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
C649	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		R444-51	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	8	
C650	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R456-62	ERJ6GEYG220	M. RESISTOR CH 1/10W 22	7	
C651	ECUM1H100DCN	C. CAPACITOR CH 50V 10P	1		R501-09	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	9	
C652	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1		R510-13	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
C653	ECUX1H020CCN	C. CAPACITOR CH 50V 2P	1		R514-16	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
C654-56	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3		R517-20	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
C657	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	1		R521-23	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	3	
C664	ECEVOJV3300	E. CAPACITOR CH6.3V 33U	1		R524	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
C751	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R525-33	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	9	
C752	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		R542, 43	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
C753, 54	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		R561, 62	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
C755	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		R565, 66	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
C756	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		R592	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
C757-61	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5		R593-12	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	20	
C801-04	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	4		R613, 14	ERJ6GEYG151	M. RESISTOR CH 1/10W 150	2	
					R615, 16	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	2	
					R617, 18	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	2	
					R619, 20	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	2	
IC1	SN74ALS244C	IC	1		R621, 22	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	2	
IC294	SN74AS244AN	IC	1		R623, 24	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
IC297	SN74AS244AN	IC	1		R629, 30	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	2	
IC298	MC10H125M	IC	1		R631-34	ERJ6GEYG151	M. RESISTOR CH 1/10W 150	4	
IC299-02	74F244SJ	IC	4		R638-40	ERJ6RED620	M. RESISTOR CH 1/10W 62	3	
IC443	SN74ALS244C	IC	1		R641	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
IC501	CG21503-131	IC	1		R642-51	ERJ6GEYG181	M. RESISTOR CH 1/10W 180	10	
IC502	74F821SC	IC	1		R652	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
IC503	MC74HC74AF	IC	1		R655	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
IC531	M4128-6410VC	IC	1	BLANK ROM	R656	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
ID531	VVVS13005A		1	SOFTWARE	R657	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
IC532	UPD6456T611Y	IC	1		R658	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
IC534	UPD6456T611Y	IC	1		R659	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
IC561	GS9001-COM	IC	1		R660, 61	ERJ6GEYG151	M. RESISTOR CH 1/10W 150	2	
IC591, 92	GS9022-CPJ	IC	2		R662	ERJ6RED620	M. RESISTOR CH 1/10W 62	1	
IC593-95	74F821SC	IC	3		R663	ERJ6GEYG151	M. RESISTOR CH 1/10W 150	1	
IC596	AN7805F	IC	1		R751-53	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	3	
IC641	GS9022-CPJ	IC	1		R755-58	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	4	
IC642	74F821SC	IC	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C900	ECUX1C224KBN	C.CAPACITOR CH 16V 0.22U	1		ID458	VVVS13032		1	SOFTWARE
C901	ECEVOJV330Q	E.CAPACITOR CH6.3V 33U	1		IC460	TVHT244F	IC	1	
C902	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC461	NVHC244F	IC	1	
C903	ECUX1E104ZEV	C.CAPACITOR CH 25V 0.1U	1		IC462	T74LCX244F	IC	1	
C905	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC463	MC10H124M	IC	1	
C906	ECUX1E104ZEV	C.CAPACITOR CH 25V 0.1U	1		IC466	NVHC244F	IC	1	
C907	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1		IC467	74F244SJ	IC	1	
C908	ECUX1E104ZEV	C.CAPACITOR CH 25V 0.1U	1		IC474	NVHC244F	IC	1	
C909	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1		IC477	MC10H124M	IC	1	
C980-85	ECUX1E104ZEV	C.CAPACITOR CH 25V 0.1U	6		IC488	SN74LS123NS	IC	1	
D1,D2	MA152WK	DIODE	2	FOR VEP88235B	IC551	TLCX04F	IC	1	
D5,D6	MA152WK	DIODE	2	FOR VEP88235B	IC600,01	TVHT244F	IC	2	
D450,51	M1MA152K	DIODE	2		IC602	NVHC244F	IC	1	
D550	LN1251CAL	DIODE	1		IC651	SN74S1053NS	IC	1	
D750,51	LN1251CAL	DIODE	2		IC652	SN74S1051NS	IC	1	
FL1	VLF0931	FILTER	1		IC656,57	74F244SJ	IC	2	
FL1	VLF1462	FILTER	1	FOR VEP88235B	IC658	SN74ALS245A	IC	1	
FL2	VLF0931	FILTER	1		IC660	NVHC32F	IC	1	
FL3-L6	VLF0576	FILTER	4		IC662	NVHC08F	IC	1	
FL7	VLF0931	FILTER	1		IC666,67	IDT71321L55F	IC	2	
IC1	LT1086CM	IC	1		IC672	NVHC00F	IC	1	
IC1	M31020EAVP	IC	1	FOR VEP88234L	IC673	NVHC138F	IC	1	
IC1	TLCX574F	IC	1	FOR VEP88235B	IC674	NVHC244F	IC	1	
IC2	NJM78L09UA	IC	1		IC676,77	TVHT573F	IC	2	
IC2	TLCX574F	IC	1	FOR VEP88235B	IC678	T74LCX245F	IC	1	
IC3	NJM79L09UA	IC	1		IC679	NVHC08F	IC	1	
IC3	T74LCX244F	IC	1	FOR VEP88235B	IC750	SN74S1051NS	IC	1	
IC4	NJM78L05UA	IC	1		IC751	SN74S1053NS	IC	1	
IC5	T74LCX244F	IC	1	FOR VEP88235B	IC752	SN74ALS245A	IC	1	
IC5	T74VHC244F	IC	1		IC753,54	74F244SJ	IC	2	
IC6	T203E3801AF1	IC	1	FOR VEP88235B	IC755	UPD71055GB	IC	1	
IC7,C8	T74VHC244F	IC	2	FOR VEP88235B	IC756	ISP2032-80LT	IC	1	BLANK ROM
IC9	MC74HC125AF	IC	1	FOR VEP88235B	ID756	VVVS13032		1	SOFTWARE
IC10	VSI3081	IC	1	FOR VEP88235B	IC758	NVHC244F	IC	1	
IC30	MM74HC221AM	IC	1	FOR VEP88235B	IC800	UPD65868D022	IC	1	
IC31	MC74HC125AF	IC	1	FOR VEP88235B	IC900	MC10H125M	IC	1	
IC32	NJM082BM	IC	1	FOR VEP88235B	IC901	NVHC04FT	IC	1	
IC33	NJM78L05UA	IC	1	FOR VEP88235B	IC902	BH7086KV	IC	1	
IC40	EPF10K20TC-4	IC	1	FOR VEP88235B	IC903	TCVHC257F	IC	1	
IC41	MC14053BF	IC	1	FOR VEP88235B	IC980,81	D485505G25	IC	2	
IC42	LT1228CS8	IC	1	FOR VEP88235B	IC982	I1032E-70LT	IC	1	BLANK ROM
IC43	CXD1175AM	IC	1	FOR VEP88235B	ID982	VVVS13032		1	SOFTWARE
IC45	TL7705CPSB	IC	1	FOR VEP88235B	IC983,84	T74LCX244F	IC	2	
IC50,51	TLCX574F	IC	2		IS10	VJS3109	IC SOCKET	1	FOR VEP88235B
IC52	TLCX574F	IC	1		L1,L2	VL00319K220	COIL	22UH	2 FOR VEP88235B
IC54	TLCX574F	IC	1		L5	VL00163J390	COIL	39UH	1 FOR VEP88235B
IC55	L7A1644	IC	1		L6	VL00163J150	COIL	15UH	1 FOR VEP88235B
IC56	NJM78L05UA	IC	1	FOR VEP88235B	L7	VL00163J390	COIL	39UH	1 FOR VEP88235B
IC57	NJM79L05UA	IC	1	FOR VEP88235B	L8	VL00163J150	COIL	15UH	1 FOR VEP88235B
IC100,01	MN4707F	IC	2		L9	VL00319K220	COIL	22UH	1 FOR VEP88235B
IC150	MN67373	IC	1		L11	VL00319K220	COIL	22UH	1 FOR VEP88235B
IC154	MN67373	IC	1		L450-52	VL00319K470	COIL	47UH	3
IC155	TCVHC257F	IC	1		L900	VL00319K100	COIL	10UH	1
IC156,57	TVHT244F	IC	2		P1	VJP3510	CONNECTOR (MALE)		1
IC158	MC10H124M	IC	1		P1	VJP4106A120L	CONNECTOR		1 FOR VEP88234L
IC251	T74LCX244F	IC	1		P2	VJP3510	CONNECTOR (MALE)		1
IC252	MB81V4260S7	IC	1		P8	VJP1248T	CONNECTOR (MALE)	8P	1
IC253	L7A1645	IC	1		P20	VJS4064N160	CONNECTOR		1 FOR VEP88235B
IC300	MB81V4260S7	IC	1		P550	VJS4106A120L	CONNECTOR		1
IC301	M65501FP	IC	1		P850	VJP4064N160C	CONNECTOR (MALE)		1
IC302	MB81V4260S7	IC	1		Q1,Q2	2SB709A-R	TRANSISTOR		2 FOR VEP88235B
IC303	M65501FP	IC	1		Q3	2SA1532-C	TRANSISTOR		1 FOR VEP88235B
IC403	MC10H125M	IC	1		QR750,51	MUN2213	TRANSISTOR-RESISTOR		2
IC404	ISP2032-80LT	IC	1	BLANK ROM	R1	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1 FOR VEP88235B
ID404	VVVS13032		1	SOFTWARE	R1	ERJ6GEYG102	M.RESISTOR CH 1/10W	1K	1
IC405	T74LCX244F	IC	1		R2	ERJ3GEYJ101	M.RESISTOR CH 1/16W	100	1 FOR VEP88235B
IC409	NVHC244F	IC	1		R2	ERJ6GEYG101	M.RESISTOR CH 1/10W	100	1
IC450	MC10H125M	IC	1		R3	ERJ6GEYJ820	M.RESISTOR CH 1/10W	82	1
IC451	74F244SJ	IC	1		R4	ERJ3GEYOR00	M.RESISTOR CH 1/16W	0	1
IC453	MC74HC125AF	IC	1						
IC455	NJM082BM	IC	1						
IC458	I1032E-70LT	IC	1	BLANK ROM					

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R181	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R5	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	FOR VEP88235B	R182	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R6-R9	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4		R184-86	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R10	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R187-97	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	11	
R11	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP88235B	R198-10	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	13	
R11	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R211, 12	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	2	
R12	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP88235B	R213, 14	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R13	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R250	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R20	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R251-61	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	11	
R23	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R262	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP88235B	R263-66	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R31-37	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	7	FOR VEP88235B	R267-77	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	11	
R40	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	FOR VEP88235B	R278, 79	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R41	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	FOR VEP88235B	R300-04	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	5	
R42	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	FOR VEP88235B	R305, 06	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R43	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	FOR VEP88235B	R307	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R44	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	FOR VEP88235B	R308	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R45, 46	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	FOR VEP88235B	R309-14	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	6	
R47	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	FOR VEP88235B	R315, 16	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R48	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	FOR VEP88235B	R317	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R49	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP88235B	R318-25	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	8	
R50-59	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	10		R326-31	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	6	
R60	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R332, 33	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R60	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R334	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R61	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R335	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R61-64	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	4		R336-41	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	6	
R65	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP88235B	R342, 43	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R65	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R344-52	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	9	
R67	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	FOR VEP88235B	R353	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R70	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	FOR VEP88235B	R390	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R72	ERJ6RBD681	M.RESISTOR CH 1/10W 680	1	FOR VEP88235B	R392	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R73	ERJ6RBD361	M.RESISTOR CH 1/10W 360	1	FOR VEP88235B	R395-98	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	4	
R74	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1		R399, 00	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R74	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	FOR VEP88235B	R402	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R75, 76	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2		R403	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R76	ERJ6RBD681	M.RESISTOR CH 1/10W 680	1	FOR VEP88235B	R404	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R77	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R405	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R77	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	FOR VEP88235B	R406, 07	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R78	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R408	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R78, 79	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2		R409-13	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	5	
R79	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	FOR VEP88235B	R419	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R80	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R421	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R80	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	FOR VEP88235B	R428, 29	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R81	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R433	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R81	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R435	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R82	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R437	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R82	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	FOR VEP88235B	R439	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R83	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP88235B	R441	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R83	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R442	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R84	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1		R450, 51	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R84	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	FOR VEP88235B	R452	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R85	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	FOR VEP88235B	R453	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R85	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R454	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R86	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	FOR VEP88235B	R459	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R86	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R464	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R87	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP88235B	R466	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R87-89	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	3		R467	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R89	ERJ6RBD271	M.RESISTOR CH 1/10W 270	1	FOR VEP88235B	R470	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R90	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R472	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R91	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	FOR VEP88235B	R473	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R92	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	FOR VEP88235B	R474	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R93	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	FOR VEP88235B	R475, 76	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R94	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP88235B	R477	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R96	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	FOR VEP88235B	R478	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R99	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	FOR VEP88235B	R479	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R100, 01	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R480	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R110-13	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	4	FOR VEP88235B	R481	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R119	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	FOR VEP88235B	R482	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R150, 51	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R483	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R152-59	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	8		R484	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R160-64	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	5		R486	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R165	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		R487	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R166, 67	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R488	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R168-75	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	8		R489, 90	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R176-80	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	5		R491	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3028	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C3243	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3029	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3244	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3030	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C3245	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3031	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3246	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3032	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1		C3247-51	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	5	
C3033	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1		C3252	ECEV1HN0100	E. CAPACITOR CH 50V 1U	1	
C3034	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3253	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3035	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3255, 56	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C3038-44	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		C3257-62	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6	
C3045	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3263	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3046-51	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6		C3264	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3052	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3265	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3053	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3266	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3054	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3267	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3055	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3268	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3058	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1		C3269	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	
C3059-61	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		C3270	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3064-74	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	11		C3271, 72	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2	
C3076-81	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6		C3273	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3083-89	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		C3274	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3096	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3275	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3097	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3276	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	
C3098	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3277	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3099	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3278, 79	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3100	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3280	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	1	
C3101	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3281	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3102	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		C3282	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3103	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3283, 84	ECEV1CV4700	E. CAPACITOR CH 16V 47U	2	
C3104	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3285	ECEV1HN0100	E. CAPACITOR CH 50V 1U	1	
C3105	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3286, 87	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3106, 07	ECEV1CV4700	E. CAPACITOR CH 16V 47U	2		C3288	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1	
C3108	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3289	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	1	
C3109	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3290	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3110	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3291	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3111	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3292	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3112	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3296	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3113	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		C3297	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3114-16	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		C3298	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3130	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3299	ECEV1VAN2R2	E. CAPACITOR CH 35V 2.2U	1	
C3134-36	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		C3300, 01	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3141	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3302	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	
C3142-45	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4		C3303, 04	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3146-63	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	18		C3305	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3175	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3306	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3176	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3307	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1	
C3178	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3308	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3181, 82	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		C3309	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	
C3184, 85	ECEV1CV1000	E. CAPACITOR CH 16V 10U	2		C3310	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C3186	ECEV1EV1000	E. CAPACITOR CH 25V 10U	1		C3311	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3189	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3312	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3190, 91	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		C3313, 14	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3192	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3315	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3193	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3316	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C3194	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3317	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3195, 96	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		C3318	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3197	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3319, 20	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2	
C3198	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3323-29	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7	
C3199	ECEV1EV3300	E. CAPACITOR CH 25V 33U	1		C3332-38	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7	
C3200-02	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		C3339	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C3203	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3340-49	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	10	
C3204	ECEV1EV3300	E. CAPACITOR CH 25V 33U	1		C3351-56	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6	
C3205	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3358-71	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	14	
C3206	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3409	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3207-12	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6		C3410	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3214	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		C3411	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3215-21	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		C3412	ECUX1H390JCV	C. CAPACITOR CH 50V 39P	1	
C3222	ECEV1HN0100	E. CAPACITOR CH 50V 1U	1		C3413-17	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	5	
C3223	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		C3418	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1	
C3224-36	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	13		C3419	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3237	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		C3420-22	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3	
C3238	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		C3425-27	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3	
C3239	ECUX1H102JV	C. CAPACITOR CH 50V 1000P	1		C3428	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3240	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1		C3431	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1	
C3241	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		C3432	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1	
C3242	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		C3433	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3434	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3074	UPD42280G3	IC	1	
C3435	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3075	UPD485506G25	IC	1	
C3436, 37	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3076	L7A1519	IC	1	
C3438	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3078-80	TVHT244FT	IC	3	
C3439	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3081, 82	TC74ACT374F	IC	2	
C3440, 41	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	2		IC3087	NJM78L09UA	IC	1	
C3442	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3088	NJM78L05UA	IC	1	
C3443	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3089	NJM79L05UA	IC	1	
C3444, 45	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3090	AN78N05	IC	1	
C3446, 47	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2		IC3091	AN78N10	IC	1	
C3448-51	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	4		IC3092	AN79N10	IC	1	
C3455	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3093-95	TVHT244FT	IC	3	
C3458	ECUX1H070DCV	C. CAPACITOR CH 50V 7P	1		IC3096	TC74ACT374F	IC	1	
C3459	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3098	TC74ACT374F	IC	1	
C3460	ECUX1C104KBN	C. CAPACITOR CH 16V 0.1U	1		IC3099	MC74HC125AF	IC	1	
C3461	ECST1CY335Z	T. CAPACITOR CH 16V 3.3U	1		IC3100	74F08SJ	IC	1	
C3462	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3101	SN74AS74ANS	IC	1	
C3463	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3102	TVHT244FT	IC	1	
C3464	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3103	TVHC240FT	IC	1	
C3465	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3104	NJM082BM	IC	1	
C3466	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3105	UPD65650J203	IC	1	
C3467	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3106	SN74LS221NS	IC	1	
C3468	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3107	MC74HC04AF	IC	1	
C3469	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1		IC3108	MC74HC257F	IC	1	
C3480-83	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	4		IC3109	AN91A12S	IC	1	
C3485-89	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	5		IC3110	NE521D	IC	1	
C3491, 92	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3111-14	MM74HC221AM	IC	4	
C3500	ECUX1E104KBN	C. CAPACITOR CH 25V 0.1U	1		IC3115	MC74HC04AF	IC	1	
C3501-03	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	3		IC3116	NJM082BM	IC	1	
C3504, 05	ECEV0JN4700	E. CAPACITOR CH6.3V 47U	2		IC3117, 18	TC7SH00FU	IC	2	
C3506	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3119	SN74LS123NS	IC	1	
C3507-10	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	4		IC3120	NE521D	IC	1	
C3511	ECEVICV1000	E. CAPACITOR CH 16V 10U	1		IC3121	NJM084M	IC	1	
C3512	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1		IC3122	MC74HC4053F	IC	1	
C3513	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1		IC3124	MC74HC4053F	IC	1	
C3514, 15	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	2		IC3126	TC7SH08FU	IC	1	
					IC3127	TC7SH00FU	IC	1	
D3001, 02	MA152K	DIODE	2		IC3129	NJM084M	IC	1	
D3003	MA142WK	DIODE	1		IC3130-32	UPD485506G25	IC	3	
D3004	MA142K	DIODE	1		IC3134, 35	SN74S1051NS	IC	2	
D3005	MA335	DIODE	1		IC3136	74ALS541SJ	IC	1	
D3006	MA142K	DIODE	1		IC3137	74ALS245ASJ	IC	1	
D3007	MA335	DIODE	1		IC3138, 39	74ALS541SJ	IC	2	
D3010	MA28W	DIODE	1		IC3140	MACH211S10VC	IC	1	
					IC3141	UPD71055GB	IC	1	
FL3013	VLF1482	FILTER	1		IC3142, 43	NVHC244F	IC	2	
					IC3144	UPD71055GB	IC	1	
IC3001	SN74AS240ASL	IC	1		IC3145	M4128-6410VC	IC	1	BLANK ROM
IC3002-08	TVHT244FT	IC	7		ID3145	VS13085B		1	SOFTWARE
IC3009-11	NVHC244F	IC	3		IC3146	TVHT244FT	IC	1	
IC3012, 13	AD9300KP	IC	2		IC3148	NVHC244F	IC	1	
IC3014	TC7504F	IC	1		IC3149	TVHT244FT	IC	1	
IC3015	AD9300KP	IC	1		IC3150	NVHC244F	IC	1	
IC3016	AD828AR	IC	1		IC3152, 53	NVHC244F	IC	2	
IC3017	ADV7171KS	IC	1		IC3154	MN47V78SP	IC	1	
IC3018	MC10H125M	IC	1		IC3156	MN47V78SP	IC	1	
IC3019	TLX574F	IC	1		IC3157, 58	NVHC244F	IC	2	
IC3020-22	NVHC574FT	IC	3		IC3159	T160G70-1601	IC	1	
IC3025	NVHC244F	IC	1		IC3160	M4128-6410VC	IC	1	BLANK ROM
IC3026, 27	TVHT244FT	IC	2		ID3160	VS13085B		1	SOFTWARE
IC3028	MC10H124M	IC	1		IC3161, 62	SN74S1051NS	IC	2	
IC3029, 30	TVHT541FT	IC	2		IC3163	M4128-6410VC	IC	1	BLANK ROM
IC3031, 32	NVHC244F	IC	2		ID3163	VS13085B		1	SOFTWARE
IC3034-38	NVHC244F	IC	5		IC3170, 71	MM74HC221AM	IC	2	
IC3041, 42	MN47V78SP	IC	2		IC3172	MC74HC157AF	IC	1	
IC3049	SN74AS244AN	IC	1		IC3173, 74	TC7SH08FU	IC	2	
IC3050	M4128-6410VC	IC	1	BLANK ROM	IC3175	SN74LS221NS	IC	1	
ID3050	VS13085B		1	SOFTWARE	IC3176	SN74AS240ASL	IC	1	
IC3057	SN74ALS04BSL	IC	1		IC3177, 78	MC74HC4053F	IC	2	
IC3061	TVHT574FT	IC	1		IC3179	NJM79L09UA	IC	1	
IC3063-65	TVHT574FT	IC	3		IC3180-82	MC74HC574AF	IC	3	
IC3071	NVHC244F	IC	1		IC3183	DAC10GS	IC	1	
IC3072	VY06629	IC	1		IC3184	NJM082BM	IC	1	
IC3073	M4128-6410VC	IC	1	BLANK ROM	IC3185	MC14053BF	IC	1	
ID3073	VS13085B		1	SOFTWARE	IC3186	ADV7171KS	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3187	AD9300KP	IC	1		R3109	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
IC3189	UPD48506G25	IC	1		R3110, 11	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
IC3190	UPD65013F101	IC	1		R3114, 15	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
IC3191, 92	UG10358B	IC	2		R3118	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC3193	M4128-6410VC	IC	1	BLANK ROM	R3119	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
ID3193	VSI3085B		1	SOFTWARE	R3120	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC3194	UG10358B	IC	1		R3121	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
IC3195	NVHC244F	IC	1		R3122	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
IC3197	UPD65042F024	IC	1		R3123	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
IC3199	S80745AND9T1	IC	1		R3124	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
IC3200	NE521D	IC	1		R3125, 26	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
IC3201	AN78N05	IC	1		R3127	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
					R3129-31	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
L3001	VL00163J180	COIL 18UH	1		R3132	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
L3002	VL00163J5R6	COIL 5.6UH	1		R3133	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
L3003, 04	VL00163J220	COIL 22UH	2		R3134, 35	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
L3008	VLP0133	COIL	1		R3136	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
L3009	VL00163J220	COIL 22UH	1		R3137-41	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	5	
L3010	VL00319K470	COIL 47UH	1		R3142	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
L3011	VL00319K680	COIL 68UH	1		R3144-53	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	10	
L3012	VL00319K221	COIL 22UH	1		R3154	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
L3013	VL00319K101	COIL 100UH	1		R3155, 56	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
L3014, 15	VL00319K470	COIL 47UH	2		R3167-70	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4	
L3016	VL00163J221	COIL 22UH	1		R3171, 72	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
L3026	VL00319K390	COIL 39UH	1		R3173, 74	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
L3027, 28	VL00163J220	COIL 22UH	2		R3183, 84	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
L3030-37	VLP0133	COIL	8		R3185-91	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	7	
L3038	VL00163J2R7	COIL 2.7UH	1		R3192	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
L3039	VL00163J5R6	COIL 5.6UH	1		R3193-99	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	7	
					R3203	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
P3001, 02	VJP3454B096	CONNECTOR (MALE)	2		R3204	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
P3003	VJP3515A080	CONNECTOR (MALE)	1		R3205, 06	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
P3004	VJP3515A052	CONNECTOR (MALE)	1		R3207	ERJ3GEYJ512	M.RESISTOR CH 1/16W 5.1K	1	
P3005	VJP3125D008	CONNECTOR (MALE)	1		R3208, 09	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
					R3211	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
Q3001, 02	MSD601-R	TRANSISTOR	2		R3212-15	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
Q3003	MSB709-R	TRANSISTOR	1		R3240-51	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	12	
Q3004, 05	2SK608-R	TRANSISTOR	2		R3252	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
Q3006	2SB709A-R	TRANSISTOR	1		R3253-68	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	16	
Q3007, 08	2SK608-R	TRANSISTOR	2		R3269-89	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	21	
Q3010	UN2212	TRANSISTOR-RESISTOR	1		R3308	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
Q3011	UN2213	TRANSISTOR-RESISTOR	1		R3309	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
Q3013	2SK1059-Z	TRANSISTOR	1		R3310-13	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	4	
Q3014	HAT1026R-EL	TRANSISTOR	1		R3315	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
					R3316	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3001-05	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	5		R3318	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3006-23	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	18		R3319	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3025-31	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	7		R3320	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3032-34	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3		R3321	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3035	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R3322	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3038, 39	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2		R3323	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3040-57	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	18		R3324	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3058, 59	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R3326	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3060	ERJ3GEYJ270	M.RESISTOR CH 1/16W 27	1		R3327	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3061	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R3328-31	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	4	
R3062	ERJ3GEYJ270	M.RESISTOR CH 1/16W 27	1		R3337, 38	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R3063-69	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	7		R3341, 42	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2	
R3070	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1		R3343	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3071	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1		R3344	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R3072	ERJ3GEYJ511	M.RESISTOR CH 1/16W 510	1		R3345	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3073	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1		R3346	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3074	ERJ6RED560	M.RESISTOR CH 1/10W 56	1		R3347	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3075	ERJ6RBD681	M.RESISTOR CH 1/10W 680	1		R3348	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3076	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1		R3349	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3077	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1		R3350	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3079	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1		R3351	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3080	ERJ6RED750	M.RESISTOR CH 1/10W 75	1		R3352, 53	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3082	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R3354, 55	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3084	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R3356	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3085	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1		R3357	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3086	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3358	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3087	ERJ6RED750	M.RESISTOR CH 1/10W 75	1		R3359	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3088	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R3360	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3089-92	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4		R3361	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3093-00	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	8		R3362, 63	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3364	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1		R3546, 47	ERJ3GEYJ6472	M.RESISTOR CH 1/16W 4.7K	2	
R3365	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R3548	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3366	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		R3549	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3367	ERJ3GEYJ6822	M.RESISTOR CH 1/16W 8.2K	1		R3551	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3368	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1		R3552	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3369	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		R3553	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R3370	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1		R3554	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3371	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3556	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3372, 73	ERJ3GEYJ6822	M.RESISTOR CH 1/16W 8.2K	2		R3557	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3374-77	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	4		R3558	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3378	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1		R3559, 60	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
R3379	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1		R3562	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3380	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1		R3564	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3381	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3565, 66	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	2	
R3382-84	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3		R3567	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3389	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3568	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3393, 94	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2		R3569	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3395, 96	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	2		R3572-74	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3397	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3576	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3398	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1		R3577	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R3399	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3578	ERJ6RED510	M.RESISTOR CH 1/10W 51	1	
R3400	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R3579, 80	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3401	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3584	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3402	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R3586	ERJ6GEYJ0R00	M.RESISTOR CH 1/10W 0	1	
R3403	ERJ3GEYJ6822	M.RESISTOR CH 1/16W 8.2K	1		R3587	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3404	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3588	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3407	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		R3589	ERJ6GEYJ0R00	M.RESISTOR CH 1/10W 0	1	
R3408	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R3590	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3409	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3591	ERJ6GEYJ0R00	M.RESISTOR CH 1/10W 0	1	
R3410	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R3592	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3411	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1		R3594, 95	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	2	
R3412	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3597, 98	ERJ6RED750	M.RESISTOR CH 1/10W 75	2	
R3414	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R3599	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3415	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3600	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1	
R3416	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1		R3601	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3417, 18	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2		R3603	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3419	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1		R3604, 05	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3420	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R3620-24	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	5	
R3421	ERJ3GEYJ6822	M.RESISTOR CH 1/16W 8.2K	1		R3625	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3422, 23	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R3626	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3424, 25	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2		R3628	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3426, 27	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R3630, 31	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2	
R3429	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3632	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3430	ERJ3GEYJ6471	M.RESISTOR CH 1/16W 470	1		R3636, 37	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2	
R3431	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3638, 39	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R3432-34	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3		R3641	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3435	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3643	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3436	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3645	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3437, 38	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R3647, 48	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	2	
R3439-43	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5		R3649	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3444-49	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	6		R3650	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R3451	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3651	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3452	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1		R3652	ERJ6RBD331	M.RESISTOR CH 1/10W 330	1	
R3454	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R3653, 54	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2	
R3455	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3658, 59	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3456, 57	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2		R3660, 61	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	2	
R3459	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1		R3662, 63	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R3462	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R3670	ERJ6RBD681	M.RESISTOR CH 1/10W 680	1	
R3465-67	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3		R3671	ERJ6RBD271	M.RESISTOR CH 1/10W 270	1	
R3468-89	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	22		R3700	ERJ3GEYJ0R00	M.RESISTOR CH 1/16W 0	1	
R3490-92	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3						
R3524	ERJ3GEYJ6822	M.RESISTOR CH 1/16W 8.2K	1		TG3001-03	EYF6CU	TEST POINT	3	
R3525	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1						
R3526	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		TP3001-13	EYF6CU	TEST POINT	13	
R3527	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		TP3015	EYF6CU	TEST POINT	1	
R3528	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1						
R3529	ERJ3GEYJ6472	M.RESISTOR CH 1/16W 4.7K	1		VC3001, 02	VCV0050	TRIMMER	2	
R3530	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1						
R3531	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1						
R3532, 33	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2		VR3001	VRV0113B102	V.RESISTOR 1K	1	
R3534, 35	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		VR3002	VRV0161B201	V.RESISTOR 200	1	
R3536	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		VR3004	VRV0161B502	V.RESISTOR 5K	1	
R3537, 38	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2		VR3005	VRV0113B202	V.RESISTOR 2K	1	
R3541	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1		VR3006	VRV0113B503	V.RESISTOR 50K	1	
R3544, 45	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		VR3007	VRV0113B103	V.RESISTOR 10K	1	
					VR3011	VRV0113B202	V.RESISTOR 2K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
VR3012	VRV0113B503	V.RESISTOR 50K	1		C651-56	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	6	
VR3013	VRV0113B103	V.RESISTOR 10K	1		C657	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1	
VR3014	VRV0161B502	V.RESISTOR 5K	1		C658	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
VR3015, 16	VRV0161B203	V.RESISTOR 20K	2		C659	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
VR3019	VRV0161B201	V.RESISTOR 200	1		C837	ECEV1HN4R70	E.CAPACITOR CH 50V 4.7U	1	
VR3020, 21	VRV0113B102	V.RESISTOR 1K	2		C838	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
VR3025	VRV0161B202	V.RESISTOR 2K	1		C839	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
					C840-42	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
X3001	VXS0788	CRYSTAL OSCILLATOR	1		C843	ECEV1HN4R70	E.CAPACITOR CH 50V 4.7U	1	
X3002	VXS0567A	CRYSTAL OSCILLATOR	1		C887	ECEV1HN4R70	E.CAPACITOR CH 50V 4.7U	1	
X3003	VXS0081	CRYSTAL OSCILLATOR	1		C888	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
X3004	VXS0363	CRYSTAL OSCILLATOR	1		C889	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
		MISCELLANEOUS			C890	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
	VML2143	CARD PULLER	1		C891	ECEV1HN4R70	E.CAPACITOR CH 50V 4.7U	1	
	VML2144	CARD PULLER	1		C920-27	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
					C970	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
					C971	ECEVOJV4700	E.CAPACITOR CH6.3V 47U	1	
					C972	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
					C973, 74	ECUX1H221KBN	C.CAPACITOR CH 50V 220P	2	
					FL1	VLF0576	FILTER	1	
■ E8	VEP84326C	F7 A PROCESS P.C. BOARD	1 (RTL)		FL431	VLF0941C223	FILTER	1	
					FL490	VLF0941C223	FILTER	1	
C1	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1		IC15	MC10H125M	IC	1	
C2	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC16	MC74HC541AF	IC	1	
C3, C4	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2		IC17	MC74HC574AF	IC	1	
C5	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC18	MC74HC541AF	IC	1	
C6, C7	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2		IC19	MC74HC153F	IC	1	
C8	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC20	T74HCT541AF	IC	1	
C9	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1		IC21	MC74HC08AF	IC	1	
C10	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC22	TVHT244F	IC	1	
C15, 16	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2		IC23	MC74HC74AF	IC	1	
C20-31	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12		IC25, 26	MC74HC541AF	IC	2	
C32	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1		IC27	MC10H124M	IC	1	
C33-35	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3		IC110, 11	SN74S1051NS	IC	2	
C110-21	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12		IC112	74F541SJ	IC	1	
C122	ECKF1H182KB	C.CAPACITOR 50V 1800P	1		IC113	74F245SJ	IC	1	
C190-94	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5		IC114, 15	74F541SJ	IC	2	
C220, 21	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		IC116, 17	74AC138SJ	IC	2	
C222, 23	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2		IC118, 19	UPD71055GB	IC	2	
C224, 25	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		IC120	74F32SJ	IC	1	
C228, 29	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		IC121	74AC04SJ	IC	1	
C231	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC190	MC74HC540AF	IC	1	
C232-34	ECEV1HVR10	E.CAPACITOR CH 50V 0.1U	3		IC191-93	MC74HC541AF	IC	3	
C235	ECEV1CV1000	E.CAPACITOR CH 16V 10U	1		IC194	MC74HC04AF	IC	1	
C236	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC220	74AC04SJ	IC	1	
C237	ECEV1CV1000	E.CAPACITOR CH 16V 10U	1		IC221	MC74HC74AF	IC	1	
C238	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC224, 25	NJM78L05UA	IC	2	
C239, 40	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2		IC226, 27	MC4044M	IC	2	
C340-44	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5		IC229	NJM319M	IC	1	
C345-47	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3		IC340	EPF10K20TC-4	IC	1	
C430	ECEVOJV3300	E.CAPACITOR CH6.3V 33U	1		IC341	S80726ANDP	IC	1	
C434	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		IC342	VS12998A	IC	1	
C435	ECUX1H122KBN	C.CAPACITOR CH 50V 1200P	1		IC343, 44	UPD42280G3	IC	2	
C438	ECEVOJV3300	E.CAPACITOR CH6.3V 33U	1		IC430	XC62FP3302P	IC	1	
C439, 40	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2		IC434	M5256DVP10VL	IC	1	
C442-45	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4		IC435	UPD65845G068	IC	1	
C447-49	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3		IC436	M5256DVP10VL	IC	1	
C490	ECEVOJV3300	E.CAPACITOR CH6.3V 33U	1		IC490	XC62FP3302P	IC	1	
C491	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		IC491	M5256DVP10VL	IC	1	
C492	ECEVOJV3300	E.CAPACITOR CH6.3V 33U	1		IC492	UPD65845G068	IC	1	
C493-01	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	9		IC493	M5256DVP10VL	IC	1	
C530	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC530	MC74HC157AF	IC	1	
C531	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		IC531	AD1893JST	IC	1	
C532, 33	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		IC533	T16GH7AF1216	IC	1	
C534	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		IC534	K6256DL67L	IC	1	
C535, 36	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		IC535	MC74HC74AF	IC	1	
C538-41	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4		IC536	MC74HC157AF	IC	1	
C590	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		IC590, 91	MC74HC157AF	IC	2	
C591	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		IC592	AD1893JST	IC	1	
C592	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		IC594	T16GH7AF1216	IC	1	
C593-96	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4		IC595	K6256DL67L	IC	1	
C598-01	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4		IC596	MC74HC157AF	IC	1	
					IC651	EPF10K20TC-4	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC652	M5M417800DJ6	IC	1	
IC653	VS13000B	IC	1	
IC654	S80726ANDP	IC	1	
IC820	74AC04SJ	IC	1	
IC821	MC74HC08AF	IC	1	
IC822	MC74HC74AF	IC	1	
IC826	SN75158P	IC	1	
IC873	SN75158P	IC	1	
IC874	MC74HC74AF	IC	1	
IC920	MC74HC08AF	IC	1	
IC921	MB87D136APFV	IC	1	
IC970	TL7705CPSB	IC	1	
IS342	VJS3096308	IC SOCKET	1	
IS653	VJS3096308	IC SOCKET	1	
L1,L2	VLP0133	COIL	2	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
R15	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R17,18	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R20	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R21	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R22	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R23-27	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	5	
R29-36	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	8	
R37-39	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	3	
R41	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R43-50	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	8	
R51	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R55	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R56	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R57	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R60,61	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R62-64	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	3	
R65	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R67-73	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	7	
R74	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R76-83	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	8	
R84,85	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R86	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R92-94	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R96-00	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	5	
R103	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R104-06	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R107-09	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R110-32	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	23	
R133-36	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R137-40	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R141-46	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	6	
R147-50	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R151-55	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	5	
R156	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R157	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R158	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R159	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R161-64	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R165	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R190	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R193-96	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R199	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R220,21	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R222	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R223	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R224,25	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R226,27	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R228,29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R232,33	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R236	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R237	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R239	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R240	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R241	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R242	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R243	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	1	
R244	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R245	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R246	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R322,23	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R340,41	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R342-45	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R348-50	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R351-56	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	6	
R357	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R395	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R397	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R399	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R401	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R431	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R434	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R437-39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R446	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R450	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R452	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R453-56	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R458	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R459,60	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R462	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R492-94	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R495	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R496-98	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R500,01	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R503,04	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R531	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R532	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R533	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R534	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R536	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R537	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R538,39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R540-43	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R544	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R546	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R548	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R550	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R554	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R555,56	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R557	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R558	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R560	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R561	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R564	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R566-73	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R590	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R591	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R593	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R595	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R597	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R599	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R600	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R601	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R602	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R603	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R606	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R608	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R613	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R614,15	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R616	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R617	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R619	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R620	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R622-25	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R629-36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R655	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R658	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R660	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R662	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R664	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R668-71	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4483	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4765, 66	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4484, 85	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2		C4767-70	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	4	
C4486	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4771, 72	ECEA1CGE221	E. CAPACITOR 16V 220U	2	
C4487	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C4773	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4488, 89	ECEA1CGE221	E. CAPACITOR 16V 220U	2		C4774	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4490, 91	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2		C4775, 76	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4492, 93	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		C4777	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4494, 95	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2		C4778	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4496, 97	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		C4779, 80	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4551	ECU1C472G	P. CAPACITOR 16V 4700P	1		C4831	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
C4552, 53	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		C4832	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1	
C4554	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1		C4833-35	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3	
C4555, 56	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		C4836, 37	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4557, 58	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2		C4838	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C4559, 60	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		C4839	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4561	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C4840	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C4562	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		C4841	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4563	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4842-45	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	4	
C4564, 65	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2		C4846, 47	ECEA1CGE221	E. CAPACITOR 16V 220U	2	
C4566	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		C4848	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4567	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4849	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4568	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C4850	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1	
C4569, 70	ECEA1CGE221	E. CAPACITOR 16V 220U	2		C4851	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4571	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1		C4852, 53	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2	
C4572	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4854, 55	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C4573	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1		C4901, 02	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2	
C4574	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		C4903, 04	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	2	
C4575, 76	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2		C4905	ECEV0JV101Q	E. CAPACITOR CH 6.3V 100U	1	
C4577, 78	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		C4906	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4579, 80	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2		C4907	ECEV0JV101Q	E. CAPACITOR CH 6.3V 100U	1	
C4626	ECU1C472G	P. CAPACITOR 16V 4700P	1		C4908	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4627	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1		C4931	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1	
C4628, 29	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		C4932	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4630	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		C4933-36	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4	
C4631	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		C4937-39	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	3	
C4632	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		C4940	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C4633	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1						
C4634, 35	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	2		D4401, 02	MA157	DIODE	2	
C4636	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		D4476, 77	MA157	DIODE	2	
C4637	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		D4551, 52	MA157	DIODE	2	
C4638, 39	ECEA1CGE221	E. CAPACITOR 16V 220U	2		D4626, 27	MA157	DIODE	2	
C4640, 41	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2		D4751	MA157	DIODE	1	
C4642, 43	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		D4752, 53	MA152WK	DIODE	2	
C4644, 45	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	2		D4754, 55	MA157	DIODE	2	
C4646, 47	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		D4831, 32	MA157	DIODE	2	
C4701-04	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4						
C4705	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	1		FL4931	VLF0941C223	FILTER	1	
C4706-10	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	5						
C4711	ECEV0JV101Q	E. CAPACITOR CH 6.3V 100U	1		IC4003	NJM79L09UA	IC	1	
C4712-14	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3		IC4004	NJM78L09UA	IC	1	
C4715-18	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	4		IC4043	NJM78L09UA	IC	1	
C4720	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1		IC4044	NJM79L09UA	IC	1	
C4721	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC4103	NJM79L09UA	IC	1	
C4722	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1		IC4104	NJM78L09UA	IC	1	
C4723, 24	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		IC4143	NJM78L09UA	IC	1	
C4725	ECEV1CV100Q	E. CAPACITOR CH 16V 10U	1		IC4144	NJM79L09UA	IC	1	
C4726	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC4201	MC74HC541AF	IC	1	
C4727	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		IC4202	NJM78L05UA	IC	1	
C4728	ECEV0JV101Q	E. CAPACITOR CH 6.3V 100U	1		IC4251	MC74HC541AF	IC	1	
C4729, 30	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2		IC4252	NJM78L05UA	IC	1	
C4731, 32	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2		IC4301	NJM78L05UA	IC	1	
C4733-36	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4		IC4302	AK4320VM	IC	1	
C4737, 38	ECU1C472G	P. CAPACITOR 16V 4700P	2		IC4303, 04	NJM4580ED	IC	2	
C4739, 40	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	2		IC4305	MC74HC157AF	IC	1	
C4745	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1		IC4306	TC7W74F	IC	1	
C4751	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC4307, 08	TC4W53F	IC	2	
C4752	ECEV1CV220Q	E. CAPACITOR CH 16V 22U	1		IC4351	NJM78L05UA	IC	1	
C4754, 55	ECEV1CV470Q	E. CAPACITOR CH 16V 47U	2		IC4352	AK4320VM	IC	1	
C4756	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1		IC4353, 54	NJM4580ED	IC	2	
C4757	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		IC4355	MC74HC157AF	IC	1	
C4758	ECEV1CN100Q	E. CAPACITOR CH 16V 10U	1		IC4356	TC7W74F	IC	1	
C4759, 60	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	2		IC4357, 58	TC4W53F	IC	2	
C4761, 62	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2		IC4401	NJM4580ED	IC	1	
C4763	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		IC4402	NJM79L05UA	IC	1	
C4764	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		IC4403	NJM78L05UA	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC4404	NJM4580ED	IC	1		Q4556	2SB710A-R	TRANSISTOR	1	
IC4405	NJM2043MD	IC	1		Q4557	2SD602A-R	TRANSISTOR	1	
IC4406	MC14052BF	IC	1		Q4626	2SD1328	TRANSISTOR	1	
IC4407, 08	AQV212SX	IC	2		Q4627	2SB1322A-R	TRANSISTOR	1	
IC4476, 77	NJM4580ED	IC	2		Q4628	2SD1994A-R	TRANSISTOR	1	
IC4478	NJM2043MD	IC	1		Q4629	2SB1322A-R	TRANSISTOR	1	
IC4479	MC14052BF	IC	1		Q4630	2SD1994A-R	TRANSISTOR	1	
IC4480, 81	AQV212SX	IC	2		Q4631	2SB710A-R	TRANSISTOR	1	
IC4551	NJM4580ED	IC	1		Q4632	2SD602A-R	TRANSISTOR	1	
IC4552	NJM79L05UA	IC	1		Q4701, 02	2SD1328	TRANSISTOR	2	
IC4553	NJM78L05UA	IC	1		Q4703, 04	2SK198-R	TRANSISTOR	2	
IC4554	NJM4580ED	IC	1		Q4751-54	2SB710A-R	TRANSISTOR	4	
IC4555	NJM2043MD	IC	1		Q4755	2SD1994A-R	TRANSISTOR	1	
IC4556	MC14052BF	IC	1		Q4756	2SB1322A-R	TRANSISTOR	1	
IC4557, 58	AQV212SX	IC	2		Q4757	2SD1994A-R	TRANSISTOR	1	
IC4626, 27	NJM4580ED	IC	2		Q4758	2SB1322A-R	TRANSISTOR	1	
IC4628	NJM2043MD	IC	1		Q4759	2SD602A-R	TRANSISTOR	1	
IC4629	MC14052BF	IC	1		Q4760	2SB710A-R	TRANSISTOR	1	
IC4630, 31	AQV212SX	IC	2		Q4831	2SD1994A-R	TRANSISTOR	1	
IC4701	NJM78L05UA	IC	1		Q4832	2SB1322A-R	TRANSISTOR	1	
IC4702	AK4320VM	IC	1		Q4833	2SD1994A-R	TRANSISTOR	1	
IC4703, 04	NJM4580ED	IC	2		Q4834	2SB1322A-R	TRANSISTOR	1	
IC4707	NJM78L09UA	IC	1		Q4835	2SD602A-R	TRANSISTOR	1	
IC4708, 09	NJM79L09UA	IC	2		Q4836	2SB710A-R	TRANSISTOR	1	
IC4710	NJM78L09UA	IC	1		Q4901-04	2SD1328	TRANSISTOR	4	
IC4711	MC74HC541AF	IC	1		QR4301	UN2213	TRANSISTOR-RESISTOR	1	
IC4712, 13	TC4W53F	IC	2		QR4302	UN2113	TRANSISTOR-RESISTOR	1	
IC4751, 52	NJM4580ED	IC	2		QR4303	UN2213	TRANSISTOR-RESISTOR	1	
IC4753	NJM2043MD	IC	1		QR4351	UN2213	TRANSISTOR-RESISTOR	1	
IC4754	AD7945BR	IC	1		QR4401	UN2213	TRANSISTOR-RESISTOR	1	
IC4755	MC14053BF	IC	1		QR4402	UN2113	TRANSISTOR-RESISTOR	1	
IC4756	MC14052BF	IC	1		QR4476	UN2213	TRANSISTOR-RESISTOR	1	
IC4757, 58	AQV212SX	IC	2		QR4477	UN2113	TRANSISTOR-RESISTOR	1	
IC4831, 32	NJM4580ED	IC	2		QR4551	UN2213	TRANSISTOR-RESISTOR	1	
IC4833	NJM2043MD	IC	1		QR4552	UN2113	TRANSISTOR-RESISTOR	1	
IC4834	AD7945BR	IC	1		QR4626	UN2213	TRANSISTOR-RESISTOR	1	
IC4835	MC14053BF	IC	1		QR4627	UN2113	TRANSISTOR-RESISTOR	1	
IC4836	MC14052BF	IC	1		QR4701-03	UN2213	TRANSISTOR-RESISTOR	3	
IC4837, 38	AQV212SX	IC	2		QR4704, 05	UN2113	TRANSISTOR-RESISTOR	2	
IC4901	NJM4556AM	IC	1		QR4751, 52	UN2213	TRANSISTOR-RESISTOR	2	
IC4931, 32	SN74S1051NS	IC	2		R4231	VL00576	COIL	1	
IC4933	74F245SJ	IC	1		R4232	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
IC4934	74F541SJ	IC	1		R4281	VL00576	COIL	1	
IC4935	74AC139SJ	IC	1		R4282	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
IC4936	74F11SJ	IC	1		R4301	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
IC4937	TC7S04F	IC	1		R4302	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
IC4938-40	UPD71055GB	IC	3		R4303	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L4301	VL00163J100	COIL	10UH	1	R4304-06	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
L4351	VL00163J100	COIL	10UH	1	R4307	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
L4701	VL00163J100	COIL	10UH	1	R4308-11	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
P4001, 02	VJP3454B096	CONNECTOR (MALE)	2		R4314	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
Q4301, 02	2SK198-R	TRANSISTOR	2		R4316-18	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	3	
Q4351, 52	2SK198-R	TRANSISTOR	2		R4319, 20	ERJ6GEY6273	M.RESISTOR CH 1/10W 27K	2	
Q4401	2SD1328	TRANSISTOR	1		R4321	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
Q4402	2SB1322A-R	TRANSISTOR	1		R4322	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
Q4403	2SD1994A-R	TRANSISTOR	1		R4323	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
Q4404	2SB1322A-R	TRANSISTOR	1		R4324	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
Q4405	2SD1994A-R	TRANSISTOR	1		R4325	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
Q4406	2SB710A-R	TRANSISTOR	1		R4326	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
Q4407	2SD602A-R	TRANSISTOR	1		R4327	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
Q4476	2SD1328	TRANSISTOR	1		R4328	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
Q4477	2SB1322A-R	TRANSISTOR	1		R4329	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
Q4478	2SD1994A-R	TRANSISTOR	1		R4330	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
Q4479	2SB1322A-R	TRANSISTOR	1		R4331	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
Q4480	2SD1994A-R	TRANSISTOR	1		R4332	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
Q4481	2SB710A-R	TRANSISTOR	1		R4333	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
Q4482	2SD602A-R	TRANSISTOR	1		R4334	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
Q4551	2SD1328	TRANSISTOR	1		R4335, 36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
Q4552	2SB1322A-R	TRANSISTOR	1		R4337	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
Q4553	2SD1994A-R	TRANSISTOR	1		R4351	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
Q4554	2SB1322A-R	TRANSISTOR	1		R4352	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
Q4555	2SD1994A-R	TRANSISTOR	1		R4353	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
					R4354-56	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4357	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		R4486	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4358-61	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4		R4487	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4364	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4488	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4366-68	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	3		R4489	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4369, 70	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	2		R4490	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4371	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1		R4491	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4372	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4492	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4373	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R4493	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4374	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1		R4494	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4375	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4495	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4376	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R4496-99	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4377	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1		R4500	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4378	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1		R4501	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4379	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1		R4502	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4380	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4503	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4381	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1		R4504, 05	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4382	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1		R4506	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4383	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1		R4507	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4384	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4509	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4385, 86	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R4510	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4401	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R4511	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4402	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4512	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4403	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1		R4513	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4404	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4514, 15	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4405	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4516	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4406	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4517, 18	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4407	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1		R4519	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4408	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4520, 21	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4409	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4522, 23	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4410	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R4524	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4411	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4525	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4412	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1		R4526	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4413	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1		R4527	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4414	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		R4528	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4415	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4529	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4416	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4530	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4417	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R4531	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4418	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1		R4551	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4419	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4552	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4420	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1		R4553	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4421-24	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4		R4554	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4425	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4555	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4426	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4556	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4427	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1		R4557	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4428, 29	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2		R4558	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4430	ERJ6RED150	M.RESISTOR CH 1/10W 15	1		R4559	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4431	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1		R4560	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4433	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4561	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4434	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4562	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4435	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1		R4563	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4436	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1		R4564	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4437, 38	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2		R4565	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4439, 40	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2		R4566	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4441	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1		R4567	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4442, 43	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2		R4568	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4444	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1		R4569	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4445, 46	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R4570	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4447, 48	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2		R4571-74	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4449	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4575	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4450, 51	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2		R4576	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4452	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4577	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4453	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1		R4578, 79	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4454	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1		R4580	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4455	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1		R4581	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4456	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		R4583	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4476	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R4584	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4477	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1		R4585	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4478	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4586	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4479	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1		R4587, 88	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4480	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4589, 90	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4481	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4591	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4482	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4592, 93	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4483	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4594	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4484	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4595, 96	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4485	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R4597, 98	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4599	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4733	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4600, 01	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2		R4734	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4602	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4735	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4603	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R4736	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4604	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1		R4737	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4605	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1		R4738	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4606	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		R4739	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4626	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R4740, 41	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4627	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1		R4742	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4628	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4743	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4629	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1		R4744	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4630	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4745	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4631	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4746	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4632	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4747	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4633	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4751	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4634	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4752	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R4635	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1		R4753	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4636	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4754	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4637	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1		R4755	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4638	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1		R4756	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4639	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		R4757, 58	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R4640	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4759	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4641	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4760	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4642	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1		R4761	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4643	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1		R4762	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4644	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4763	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4645	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1		R4764	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R4646-49	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4		R4765	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4650	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4766	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4651	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4767	ERJ6RED220	M.RESISTOR CH 1/10W 22	1	
R4652	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4768	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4653	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1		R4769	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4654, 55	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2		R4770	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4656	ERJ6RED150	M.RESISTOR CH 1/10W 15	1		R4771	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4657	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1		R4772	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4659	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4773	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4660	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1		R4774	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4661	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4775-77	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	3	
R4662	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1		R4778	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4663	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1		R4779	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
R4664, 65	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2		R4780	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4666	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1		R4781-84	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4667, 68	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2		R4785	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4669	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1		R4786	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4670, 71	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2		R4787	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4672, 73	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2		R4788-90	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	3	
R4674	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1		R4791	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4675	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4793	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4676	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1		R4794	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4677	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4795	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4678	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1		R4796, 97	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4679	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1		R4798, 99	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4680	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1		R4800, 01	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4681	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1		R4802	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4701, 02	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2		R4803, 04	ERJ14YJ220	M.RESISTOR CH 1/4W 22	2	
R4703, 04	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2		R4805, 06	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4705-10	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6		R4807, 08	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4713	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1		R4809, 10	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R4714	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4811, 12	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4716	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1		R4813	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R4717	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1		R4814	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4718, 19	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	2		R4815	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4720	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R4816	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4721	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1		R4831	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4722	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4832	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4723	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1		R4833	ERJ6RED220	M.RESISTOR CH 1/10W 22	1	
R4724	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		R4834	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4725	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1		R4835	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4726	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1		R4836	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4727	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4837-39	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	3	
R4728	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1		R4840	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4729	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1		R4841	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4730	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1		R4842	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4731	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1		R4843	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4732	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1		R4844	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4219	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		Q4205	2SD602A-R	TRANSISTOR	1	
C4220	ECEV1CV2200	E. CAPACITOR CH 16V 22U	1		Q4206	2SB710A-R	TRANSISTOR	1	
C4221	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1						
C4222	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		QR4001	UN2213	TRANSISTOR-RESISTOR	1	
C4247	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1		QR4201	UN2213	TRANSISTOR-RESISTOR	1	
C4303-06	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	4						
C4307,08	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2						
C4401	ECEV1CV2200	E. CAPACITOR CH 16V 22U	1		R4013	ERJ6RBD433	M. RESISTOR CH 1/10W 43K	1	
C4402	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R4014, 15	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
C4403	ECEV0JV1010	E. CAPACITOR CH6.3V 100U	1		R4016	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	1	
C4404-06	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	3		R4017	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
C4407	ECEV1CV2200	E. CAPACITOR CH 16V 22U	1		R4018	ERJ6GEYF561	M. RESISTOR CH 1/10W 560	1	
C4408	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R4022	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
C4409	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		R4023	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
C4410-13	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	4		R4025	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
C4414	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		R4026	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
C4415	ECEV0JV1010	E. CAPACITOR CH6.3V 100U	1		R4027	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
C4416	ECUM1E104ZFN	C. CAPACITOR CH 25V 0.1U	1		R4028	ERJ6GEYF124	M. RESISTOR CH 1/10W 120K	1	
C4417	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		R4029	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
C4418	ECEV1CN1000	E. CAPACITOR CH 16V 10U	1		R4030	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
					R4031	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
D4102	MA157	DIODE	1		R4032	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
D4201,02	MA157	DIODE	2		R4033,34	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
					R4035	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
FL4002	VLF1069	FILTER	1		R4036	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
					R4037	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4003	CXA1102M	IC	1		R4038	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
IC4004,05	NJM4580ED	IC	2		R4039,40	ERJ6RBD122	M. RESISTOR CH 1/10W 1.2K	2	
IC4006	MC14052BF	IC	1		R4041	ERJ6RBD823	M. RESISTOR CH 1/10W 82K	1	
IC4008	NJM4580ED	IC	1		R4044	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
IC4009	AN78N09	IC	1		R4045	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4010	AN79N09	IC	1		R4046	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
IC4011,12	NJM4580ED	IC	2		R4047,48	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
IC4013	MC14053BF	IC	1		R4049	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4014	NJM4580ED	IC	1		R4051	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4015	MC14053BDT	IC	1		R4052	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	1	
IC4101	AD7945BR	IC	1		R4053	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
IC4103	NJM4580ED	IC	1		R4054	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
IC4106	MC14053BF	IC	1		R4055	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
IC4108	XC62AP3002P	IC	1		R4056	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4109	AK4503VF	IC	1		R4057	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
IC4110	T74VHCT244F	IC	1		R4058,59	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
IC4111	T74VHC244F	IC	1		R4060,61	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
IC4115	NJM78L05UA	IC	1		R4064-66	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
IC4116	NJM79L05UA	IC	1		R4068,69	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
IC4117	MC14053BF	IC	1		R4071	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
IC4201	MC14052BF	IC	1		R4072	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4202	NJM4580ED	IC	1		R4081	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4203	NJM2043MD	IC	1		R4082	ERJ6GEYF393	M. RESISTOR CH 1/10W 39K	1	
IC4204,05	A0V212SX	IC	2		R4083	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4207	TC4W53F	IC	1		R4085	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4301,02	SN74S1051NS	IC	2		R4092	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
IC4303	74F245SJ	IC	1		R4094	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4304	74F541SJ	IC	1		R4096	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4305	74AC139SJ	IC	1		R4101	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
IC4306	TC7SU04F	IC	1		R4102	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
IC4307,08	UPD71055GB	IC	2		R4103	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4401	TC4W53F	IC	1		R4110	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
IC4402	MC74HC74AF	IC	1		R4118	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
IC4403	MC74HC541AF	IC	1		R4119	ERJ6RBD153	M. RESISTOR CH 1/10W 15K	1	
IC4404	MB621926	IC	1		R4121	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4405	MB81480070	IC	1		R4131,32	ERJ6GEYJ100	M. RESISTOR CH 1/10W 10	2	
IC4406	NJM78L05UA	IC	1		R4134	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
IC4407	AK4320VM	IC	1		R4135	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC4408	TC4W53F	IC	1		R4136	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
					R4137,38	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
P4001	VJP3454B096	CONNECTOR (MALE)	1		R4139,40	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
P4002	VJP1230T	CONNECTOR (MALE)	3P		R4142	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
					R4164	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
Q4001,02	2SD1149-R	TRANSISTOR	2		R4165	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
Q4003	2SB792-R	TRANSISTOR	1		R4166	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
Q4201	2SD1994A-R	TRANSISTOR	1		R4169	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
Q4202	2SB1322A-R	TRANSISTOR	1		R4172	ERJ6RBD152	M. RESISTOR CH 1/10W 1.5K	1	
Q4203	2SD1994A-R	TRANSISTOR	1		R4173	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
Q4204	2SB1322A-R	TRANSISTOR	1		R4174	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
					R4175	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5355	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC5301	UPC1663G	IC	1	
C5356	ECUX1H102JCV	C. CAPACITOR CH 50V 1000P	1		IC5302	NJM1496M	IC	1	
C5357-63	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		IC5303	NJM084V	IC	1	
C5364, 65	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	2		IC5305	TC7S04F	IC	1	
C5366-72	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		IC5306	AN3730FA	IC	1	
C5373	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	1		IC5307	AN3740FAP	IC	1	
C5374-79	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6		IC5308	NJM082BV	IC	1	
C5381	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC5309	THC4066FT	IC	1	
C5382-85	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	4		IC5310	UPC1663G	IC	1	
C5386-92	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	7		IC5311	AD9057BRS	IC	1	
C5393	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1		IC5312	TC6326AF	IC	1	
C5394	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1		IC5313	NJM084V	IC	1	
C5395	ECUX1H821JCV	C. CAPACITOR CH 50V 820P	1		IC5600	NVHC244F	IC	1	
C5398	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC5601	M62370GP	IC	1	
C5400-02	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		IC5602-04	THC4053FT	IC	3	
C5403	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1		IC5605, 06	NJM084V	IC	2	
C5404-08	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	5		IC5607	AN7805F	IC	1	
C5411-14	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	4		IC5608	AN7905F	IC	1	
C5415	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1		IC5609	LT1086CM	IC	1	
C5416	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		IC5610	XC62AP3202P	IC	1	
C5417-24	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	8						
C5425	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1		L5001	VL00188K1R0N	COIL	1UH	1
C5426-29	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	4		L5002, 03	VL00163KR39	COIL	0.39UH	2
C5430	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1		L5005-11	VL00771R10K	COIL	1UH	7
C5431-40	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	10		L5301	VL00188K1R0N	COIL	1UH	1
C5442-44	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		L5302, 03	VL00163KR39	COIL	0.39UH	2
C5451	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		L5305-11	VL00771R10K	COIL	1UH	7
C5601-30	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	30		L5601, 02	ELESE4R7JA	COIL	4.7UH	2
C5640	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1						
C5641	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		P5001	VJP3454B096	CONNECTOR (MALE)		1
C5642	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		P5002	VJP1230T	CONNECTOR (MALE)	3P	1
C5643	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		P5003	VJP1230R	CONNECTOR (MALE)		1
C5644, 45	ECEV1CV4700	E. CAPACITOR CH 16V 47U	2						
C5646	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05001	XN6537	TRANSISTOR-RESISTOR		1
C5647	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		05002, 03	2SC3930-B	TRANSISTOR		2
C5648	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05004	XN5531	TRANSISTOR-RESISTOR		1
C5649, 50	ECEV1CV4700	E. CAPACITOR CH 16V 47U	2		05005	2SC3930-B	TRANSISTOR		1
C5651	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05006	XN5531	TRANSISTOR-RESISTOR		1
C5652	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		05007, 08	2SK508K512	TRANSISTOR		2
C5654	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		05009-11	2SC3930-B	TRANSISTOR		3
C5655	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05012, 13	2SK508K512	TRANSISTOR		2
C5656	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		05014, 15	XN5531	TRANSISTOR-RESISTOR		2
C5658	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05016-19	2SC3930-B	TRANSISTOR		4
C5659	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		05020	2SD1819A	TRANSISTOR		1
C5660	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05021	XN5531	TRANSISTOR-RESISTOR		1
C5661	ECEV0JV1010	E. CAPACITOR CH6.3V 100U	1		05022	2SA1532-C	TRANSISTOR		1
C5662	ECEV0JV4700	E. CAPACITOR CH6.3V 47U	1		05023	2SC3930-B	TRANSISTOR		1
C5663	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		05024	XN5531	TRANSISTOR-RESISTOR		1
C5664	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		05301	XN6537	TRANSISTOR-RESISTOR		1
C5665-67	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	3		05302, 03	2SC3930-B	TRANSISTOR		2
C5668	ECEV0JV4700	E. CAPACITOR CH6.3V 47U	1		05304	XN5531	TRANSISTOR-RESISTOR		1
					05305	2SC3930-B	TRANSISTOR		1
D5001	MA142WK	DIODE	1		05306	XN5531	TRANSISTOR-RESISTOR		1
D5004	MA142WK	DIODE	1		05307, 08	2SK508K512	TRANSISTOR		2
D5301	MA142WK	DIODE	1		05309-11	2SC3930-B	TRANSISTOR		3
					05312, 13	2SK508K512	TRANSISTOR		2
FL5601-06	VLF0931	FILTER	6		05314, 15	XN5531	TRANSISTOR-RESISTOR		2
					05316-19	2SC3930-B	TRANSISTOR		4
IC5001	UPC1663G	IC	1		05320	2SD1819A	TRANSISTOR		1
IC5002	NJM1496M	IC	1		05321	XN5531	TRANSISTOR-RESISTOR		1
IC5003	NJM084V	IC	1		05322	2SA1532-C	TRANSISTOR		1
IC5004	NJM319V	IC	1		05323	2SC3930-B	TRANSISTOR		1
IC5005	TC7S04F	IC	1		05324	XN5531	TRANSISTOR-RESISTOR		1
IC5006	AN3730FA	IC	1		05601	2SB710A-R	TRANSISTOR		1
IC5007	AN3740FAP	IC	1		05602	2SB956-R	TRANSISTOR		1
IC5008	NJM082BV	IC	1						
IC5009	THC4066FT	IC	1		R5001, 02	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	2
IC5010	UPC1663G	IC	1		R5003	ERJ3RED560	M. RESISTOR CH 1/16W	56	1
IC5011	AD9057BRS	IC	1		R5004, 05	ERJ3RBD271	M. RESISTOR CH 1/16W	270	2
IC5012	TC6326AF	IC	1		R5006	ERJ3RBD101	M. RESISTOR CH 1/16W	100	1
IC5013	NJM084V	IC	1		R5007, 08	ERJ3RBD331	M. RESISTOR CH 1/16W	330	2
IC5014	T74LCX244F	IC	1		R5009, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W	33	2
IC5015	MC10H124M	IC	1		R5011, 12	ERJ3RBD222	M. RESISTOR CH 1/16W	2.2K	2
IC5016	S80730ANDT	IC	1		R5013, 14	ERJ3GEYJ470	M. RESISTOR CH 1/16W	47	2
IC5017	NVHC244F	IC	1		R5015, 16	ERJ3GEYJ330	M. RESISTOR CH 1/16W	33	2

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5017, 18	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	2		R5124	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5019	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5125	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5020	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1		R5126, 27	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R5021	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R5129	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5022-24	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3		R5130	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5025, 26	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2		R5131	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5027, 28	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	2		R5132	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5029	ERJ3RED820	M. RESISTOR CH 1/16W 82	1		R5133	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5030	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1		R5134, 35	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
R5031	ERJ3RBD221	M. RESISTOR CH 1/16W 220	1		R5136	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R5032	ERJ3RED820	M. RESISTOR CH 1/16W 82	1		R5137	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R5033	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1		R5138	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R5034	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1		R5139	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5035	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5140	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5036	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1		R5141	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R5037	ERJ3RED820	M. RESISTOR CH 1/16W 82	1		R5142	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5038	ERJ3RBD221	M. RESISTOR CH 1/16W 220	1		R5143	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R5039	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5146	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R5040	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R5147	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R5041	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5148	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R5042	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1		R5149	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R5043	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5150	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R5044	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1		R5151	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R5045	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1		R5152	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5046, 47	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2		R5154	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R5048, 49	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	2		R5155	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5050, 51	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2		R5156	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5052	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1		R5157	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5053	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1		R5158, 59	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5054	ERJ3RED820	M. RESISTOR CH 1/16W 82	1		R5160, 61	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5055	ERJ3RBD103	M. RESISTOR CH 1/16W 10K	1		R5162	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5056-58	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	3		R5163	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5059, 60	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2		R5164	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5061, 62	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2		R5165	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5063, 64	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2		R5166	ERJ3RED750	M. RESISTOR CH 1/16W 75	1	
R5065, 66	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2		R5167	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
R5067, 68	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2		R5168, 69	ERJ3RED360	M. RESISTOR CH 1/16W 36	2	
R5069, 70	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	2		R5170, 71	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5071	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5172	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R5072	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R5173, 74	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	2	
R5073	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1		R5175	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5074	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R5176, 77	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5075	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5179	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5076-79	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	4		R5181-84	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4	
R5080	ERJ3RBD102	M. RESISTOR CH 1/16W 1K	1		R5185, 86	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R5081	ERJ3RBD821	M. RESISTOR CH 1/16W 820	1		R5187, 88	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R5082-85	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	4		R5189	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5086	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1		R5190, 91	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R5087	ERJ3RBD681	M. RESISTOR CH 1/16W 680	1		R5192, 93	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	2	
R5088	ERJ3RBD332	M. RESISTOR CH 1/16W 3.3K	1		R5194	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5089, 90	ERJ3RBD392	M. RESISTOR CH 1/16W 3.9K	2		R5197	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5091	ERJ3RBD822	M. RESISTOR CH 1/16W 8.2K	1		R5198	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5092	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1		R5199	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R5093-96	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	4		R5200	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5097-99	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3		R5201	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R5100	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1		R5203	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5101, 02	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2		R5204, 05	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	2	
R5103	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R5210-14	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R5104	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1		R5215-19	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	5	
R5105	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1		R5220	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R5106	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1		R5221	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R5107	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1		R5222	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5108	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R5301, 02	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5109	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1		R5303	ERJ3RED560	M. RESISTOR CH 1/16W 56	1	
R5110	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R5304, 05	ERJ3RBD271	M. RESISTOR CH 1/16W 270	2	
R5111	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1		R5306	ERJ3RBD101	M. RESISTOR CH 1/16W 100	1	
R5112	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1		R5307, 08	ERJ3RBD331	M. RESISTOR CH 1/16W 330	2	
R5113	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1		R5309, 10	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5114, 15	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2		R5311, 12	ERJ3RBD222	M. RESISTOR CH 1/16W 2.2K	2	
R5116, 17	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2		R5313, 14	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	2	
R5118, 19	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	2		R5315, 16	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	2	
R5120	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5317, 18	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	2	
R5121	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1		R5319	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
R5122	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1		R5320	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R5123	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1		R5321	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5322-24	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3		R5430	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5325, 26	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		R5431	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5327, 28	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	2		R5432	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5329	ERJ3RED820	M.RESISTOR CH 1/16W 82	1		R5433	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R5330	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1		R5434, 35	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R5331	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1		R5436	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5332	ERJ3RED820	M.RESISTOR CH 1/16W 82	1		R5437	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R5333	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1		R5438	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R5334	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1		R5439	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5335	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5440	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5336	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1		R5441	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5337	ERJ3RED820	M.RESISTOR CH 1/16W 82	1		R5442	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5338	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1		R5443	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R5339	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5446	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R5340	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R5447	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R5341	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5448	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5342	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R5449	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R5343	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5450	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R5344	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1		R5451	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R5345	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1		R5452	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5346, 47	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R5454	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R5348, 49	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2		R5455	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5350, 51	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		R5456	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5352	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1		R5457	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5353	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R5458, 59	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5354	ERJ3RED820	M.RESISTOR CH 1/16W 82	1		R5460, 61	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R5355	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		R5462	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5356-58	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	3		R5463	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R5359, 60	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R5464	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R5361, 62	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		R5465	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5363, 64	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2		R5466	ERJ3RED750	M.RESISTOR CH 1/16W 75	1	
R5365, 66	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R5467	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5367, 68	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		R5468, 69	ERJ3RED360	M.RESISTOR CH 1/16W 36	2	
R5369, 70	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2		R5470, 71	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5371	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5472	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5372	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R5473, 74	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2	
R5373	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1		R5475	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R5374	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R5476, 77	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5375	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5479	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5376-79	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4		R5481-84	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	4	
R5380	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1		R5485, 86	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R5381	ERJ3RBD821	M.RESISTOR CH 1/16W 820	1		R5487, 88	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R5382-85	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	4		R5489	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5386	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1		R5490, 91	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R5387	ERJ3RBD681	M.RESISTOR CH 1/16W 680	1		R5492, 93	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R5388	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1		R5494	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5389, 90	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	2		R5497	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5391	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1		R5498	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R5392	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R5499	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5393-96	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	4		R5500	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5397-99	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3		R5501	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5400	ERJ3GEYJ750	M.RESISTOR CH 1/16W 75	1		R5503	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R5401, 02	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R5504, 05	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	2	
R5403	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R5514	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5404	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1		R5519	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5405	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1		R5522	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5406	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1		R5601-03	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5407	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1		R5604, 05	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5408	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R5606-08	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R5409	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R5609-11	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5410	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R5612-14	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R5411	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		R5615-18	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R5412	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1		R5619-21	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R5413	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1		R5622-39	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	18	
R5414, 15	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		R5640	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5416, 17	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		R5641	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5418, 19	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2		R5642	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R5420	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5643	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R5421	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R5644	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R5422	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5645	ERJ3RBD182	M.RESISTOR CH 1/16W 1.8K	1	
R5423	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1		R5646	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5424	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R5647	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R5425	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		R5648	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R5426, 27	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	2		R5649	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R5429	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		R5650	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5651	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1		IC5004,05	XC62DN5002P	IC	2	
R5652	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		IC5010	MC74HC04AF	IC	1	
R5653	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		IC5100	UPC5102GS030	IC	1	
R5654	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		IC5200	UPC5102GS030	IC	1	
R5655	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		IC5300	UPC5102GS030	IC	1	
R5656	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		IC5400	UPC5102GS030	IC	1	
R5657	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		IC5500	UPC5102GS030	IC	1	
R5658	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1		IC5600	UPC5102GS030	IC	1	
R5659	ERJ3RBD182	M.RESISTOR CH 1/16W 1.8K	1						
R5660	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		P5001	VJS3375B060	CONNECTOR (FEMALE)	1	
R5661	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1		P5002	VJS3900C013	CONNECTOR (FEMALE)	1	
R5662	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		P5003	VJS3900A024	IC	1	
R5663	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1						
R5664	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1		05100,01	XN5531	TRANSISTOR-RESISTOR	2	
R5665	ERJ3RBD123	M.RESISTOR CH 1/16W 12K	1		05200,01	XN5531	TRANSISTOR-RESISTOR	2	
R5666	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1		05300,01	XN5531	TRANSISTOR-RESISTOR	2	
R5667	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1		05400,01	XN5531	TRANSISTOR-RESISTOR	2	
R5670	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1		05500,01	XN5531	TRANSISTOR-RESISTOR	2	
R5671-75	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5		05600,01	XN5531	TRANSISTOR-RESISTOR	2	
R5676	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1						
R5677-84	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	8		R5100	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5685	ERJ3RBD121	M.RESISTOR CH 1/16W 120	1		R5101,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R5686	ERJ3RBD181	M.RESISTOR CH 1/16W 180	1		R5103	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5687	ERJ14YJ180	M.RESISTOR CH 1/4W 18	1		R5104,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R5688	ERJ12YJ2R2	M.RESISTOR CH 1/2W 2.2	1		R5106,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R5689-91	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3		R5108,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R5692-95	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4		R5110	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
					R5111,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
RY5001	VSY2069	RELAY	1		R5113	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
RY5301	VSY2069	RELAY	1		R5114	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
					R5115,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
TG5001-05	VJR0646	TEST POINT	5		R5200	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
					R5201,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
TP5001,02	VJR0646	TEST POINT	2		R5203	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
TP5010,11	EYF6CU	TEST POINT	2		R5204,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
TP5015,16	EYF6CU	TEST POINT	2		R5206,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
TP5017-20	VJR0646	TEST POINT	4		R5208,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
TP5050-55	VJR0646	TEST POINT	6		R5210	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
TP5100-05	VJR0646	TEST POINT	6		R5211,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
					R5213	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
VR5001	EVMEASA00B24	V.RESISTOR 20K	1		R5214	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
VR5301	EVMEASA00B24	V.RESISTOR 20K	1		R5215,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
					R5300	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
		MISCELLANEOUS			R5301,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
					R5303	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
	VSC3626	HEAT SINK (A)	2		R5304,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
	XNG3BS	NUT	2		R5306,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
	XYN3+F12S	SCREW	2		R5308,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
	VML2143	CARD PULLER	1		R5310	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
	VML2144	CARD PULLER	1		R5311,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
					R5313	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
					R5314	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
					R5315,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
					R5400	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
■ E14	VEP85174A	HEAD AMP P.C. BOARD	1 (RTL)		R5401,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
					R5403	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
					R5404,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
					R5406,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
C5001	E0EV1CV4700	E.CAPACITOR CH 16V 47U	1		R5408,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
C5002	E0EV1CV1000	E.CAPACITOR CH 16V 10U	1		R5410	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
C5003	E0EV1CV4700	E.CAPACITOR CH 16V 47U	1		R5411,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
C5004	E0EV1CV1000	E.CAPACITOR CH 16V 10U	1		R5413	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
C5005	E0EV1CV4700	E.CAPACITOR CH 16V 47U	1		R5414	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
C5006-11	E0EV1CV1000	E.CAPACITOR CH 16V 10U	6		R5415,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
C5051-62	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5500	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
C5100-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5501,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
C5200-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5503	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
C5300-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5504,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
C5400-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5506,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
C5500-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5508,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
C5600-11	E0UX1E104ZV	C.CAPACITOR CH 25V 0.1U	12		R5510	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
					R5511,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
FL5001-03	VLFI016A470	FILTER	3		R5513	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
					R5514	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
IC5001-03	XC62AP5002P	IC	3		R5515,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5600	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1		IC5	NJM78L09UA	IC	1	
R5601,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2		IC6	NJM79L09UA	IC	1	
R5603	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1		IC201,02	MC14021BF	IC	2	
R5604,05	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2		IC203	SN74S1051NS	IC	1	
R5606,07	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		IC205,06	MC14094BF	IC	2	
R5608,09	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2		IC207	MC14050BF	IC	1	
R5610	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1		IC208	MC14049UBF	IC	1	
R5611,12	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		IC209	NJM78L09UA	IC	1	
R5613	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		IC210	NJM79L09UA	IC	1	
R5614	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1						
R5615,16	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2		J2, J3	VJS3901	CONNECTOR (FEMALE)	2	
R5617-22	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6		J4, J5	VJS3902	CONNECTOR (FEMALE)	2	
					J14, 15	VJP3414A009	CONNECTOR (MALE)	2	
TG5001	VJR0646	TEST POINT	1		J16	VJP3414A015	CONNECTOR (MALE)	1	
		MISCELLANEOUS			J17, 18	VJP3414A025	CONNECTOR (MALE)	2	
	VMP5846	RF ANGLE	1		L1	VLQEL05F101J	COIL 100UH	1	
	XTV3+6FFR	SCREW	2		P1	VJP3375A060	CONNECTOR (MALE)	1	
	VEE9862	GND CABLE	1						
					O9	2SA1022-C	TRANSISTOR	1	
					O10	2SC2295	TRANSISTOR	1	
					O11	2SB709A-R	TRANSISTOR	1	
					O12, 13	2SD601A-R	TRANSISTOR	2	
					O14	2SB709A-R	TRANSISTOR	1	
					O15, 16	2SD601A-R	TRANSISTOR	2	
					O17	2SB709A-R	TRANSISTOR	1	
					O18, 19	2SD601A-R	TRANSISTOR	2	
					O20	2SB709A-R	TRANSISTOR	1	
					O21, 22	2SD601A-R	TRANSISTOR	2	
					O23	2SB709A-R	TRANSISTOR	1	
					O24, 25	2SD601A-R	TRANSISTOR	2	
					O26	2SB709A-R	TRANSISTOR	1	
					O27, 28	2SD601A-R	TRANSISTOR	2	
					O201-12	UN2214	TRANSISTOR-RESISTOR	12	
					R33	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R34	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R35	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
					R36	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
					R37, 38	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
					R39	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
					R40	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
					R41, 42	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
					R43	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R44	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R45, 46	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R47	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R48-50	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
					R51	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R52	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R53, 54	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R55	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R56-58	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
					R59	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R60	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R61, 62	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R63	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R64-66	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
					R67	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R68	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R69, 70	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R71	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R72-74	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
					R75	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R76	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R77, 78	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R79	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R80-82	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
					R83	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
					R84	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R85, 86	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
					R87	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
					R88	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
					R201,02	ERJ6GEYG682	M.RESISTOR CH 1/10W 6.8K	2	
D5	MA152K	DIODE	1						
D6-11	MA3130-L	DIODE	6						
D201,02	MA152K	DIODE	2						
IC1	NJM78L09UA	IC	1						
IC2	NJM79L09UA	IC	1						
IC3	NJM78L09UA	IC	1						
IC4	NJM79L09UA	IC	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R203	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		P1102, 03	VJP2639	CONNECTOR (MALE)	2	
R204	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1		P1104	VJP4033	CONNECTOR (MALE)	1	
R205	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1						
R206	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1		Q1101, 02	2SK1941-R	TRANSISTOR	2	
R207	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1		Q1105	UN2213	TRANSISTOR-RESISTOR	1	
R208	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1						
R209-32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	24		△ R1101	ERC12AGM334	S.RESISTOR 1/2W 330K	1	
R241	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1		△ R1102, 03	ERU5TEJ100	F.RESISTOR 5W 10	2	
R242	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1		R1104	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R243	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1		R1105, 06	ERG2SJ220	M.RESISTOR 2W 22	2	
△ R244	ER012HJ2R7	F.RESISTOR 1/2W 2.7	1		R1107	VRE0206	M.RESISTOR	1	
R251-55	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	5		R1108	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
					R1109	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
SW2	VSS0307	SWITCH	1		R1110	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
		MISCELLANEOUS			R1111	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
					R1112	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
	VMP5684	P.C. BOARD ANGLE	1		R1113	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	1	
	VMP4866	D SUB ANGLE	1		R1114	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
	YX00102	SCREW	10		R1115, 16	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
	XTN26+6FFZ	SCREW	4		R1117, 18	ERG3SJ333	M.RESISTOR 3W 33K	2	
	XTN3+10JFZ	SCREW	4		R1119	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
	XYE3+EF8	SCREW	2		R1120	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
					R1122	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	1	
					R1123	ERJ14YJ474	M.RESISTOR CH 1/4W 470K	1	
					R1125	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
					R1127	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
					R1129	ERJ14YJ474	M.RESISTOR CH 1/4W 470K	1	
■ E17	VEP81183A	POWER 1 P.C. BOARD	1	(RTL)	R1130	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
					R1131	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
△ C1101	ECOU2A224MV	P. CAPACITOR 100V 0.22U	1		R1132	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
△ C1102, 03	VXK0262K471A	C. CAPACITOR 470P	2		R1133	ERJ6GEYG390	M.RESISTOR CH 1/10W 39	1	
△ C1104	ECOU2A474MV	P. CAPACITOR 100V 0.47U	1		R1134, 35	ERJ14YJ224	M.RESISTOR CH 1/4W 220K	2	
△ C1105, 06	VXK0262K101A	C. CAPACITOR 100P	2		R1136	ERJ14YJ154	M.RESISTOR CH 1/4W 150K	1	
△ C1107, 08	VXK0260M152A	C. CAPACITOR 1500P	2		R1137	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
△ C1109	VXK0260M102A	C. CAPACITOR 1000P	1		R1138	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
C1110, 11	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		R1139-41	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	3	
C1112	VXK0293	C. CAPACITOR	1		R1142	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
C1115, 16	VXK0106K471	C. CAPACITOR 470P	2		R1143, 44	ERJ12YJ224	M.RESISTOR CH 1/2W 220K	2	
C1117, 18	ECEC2WC151EB	E. CAPACITOR 450V 150U	2		R1145	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
C1119, 20	VXK0106K471	C. CAPACITOR 470P	2		R1146	VRT0142	THERMISTOR	1	
C1121	ECAT1HXLV100	E. CAPACITOR 50V 10U	1		R1147	ERG2SJ471	M.RESISTOR 2W 470	1	
C1122	ECAT1HXS100	E. CAPACITOR 50V 10U	1		R1148-50	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	3	
C1124, 25	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	2		R1151	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
C1126	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1		R1153, 54	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	2	
C1127	ECOV1H684JF	P. CAPACITOR 50V 0.68U	1		R1155, 56	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
C1128	ECAT1HF0101	E. CAPACITOR 50V 100U	1		R1158	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
C1129	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1		R1159	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
C1130	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		R1160	ERJ6RED224	M.RESISTOR CH 1/10W 220K	1	
C1131	ECOF6222JZ	P. CAPACITOR 630V 2200P	1		R1161	ERJ6RBD104	M.RESISTOR CH 1/10W 100K	1	
C1132, 33	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		R1162	ERJ6RED334	M.RESISTOR CH 1/10W 330K	1	
C1134	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	1		R1163	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
					R1165	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
					R1166	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
D1101	RBV606	DIODE	1		VR1102	VRV0109B501	V.RESISTOR 500	1	
D1102	TN1661S-L	DIODE	1				MISCELLANEOUS		
D1103	UIGU44	DIODE	1						
D1104	FML-36S	DIODE	1		△	VMZ0965	CAPACITOR COVER	3	
D1105, 06	ERA15-08	DIODE	2		△	VMZ1608	CAPACITOR COVER	4	
D1107, 08	MA3200-M	DIODE	2			VSC4708	HEAT SINK (A)	1	
D1110	MA151K	DIODE	1			XYE3+EF8	SCREW	2	
D1111-13	UIGU44	DIODE	3			XYN3+F6FZS	SCREW	1	
D1114, 15	MA3068-M	DIODE	2			XYN3+F8	SCREW	5	
D1116	MA3200-M	DIODE	1			XYN3+F10	SCREW	1	
D1117	MA151K	DIODE	1			VJR1008	EARTH LUG	3	
						VJF1348	BINDER	1	
IC1101	MC33262P	IC	1						
IC1102	M51945BL	IC	1		■ E18	VEP81184A	POWER 2 P.C. BOARD	1	(RTL)
IC1103	M51953BL	IC	1						
△ L1101	ELF18D850C	FILTER	1		C1002, 03	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	2	
△ L1102, 03	ELF18D604F	FILTER	2		C1004-07	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	4	
L1105	VLQ0820	COIL	1						
P1101	VJP2638	CONNECTOR (MALE)	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1008	ECUM1H22KBN	C. CAPACITOR CH 50V 2200P	1		D1035	FMB-G14L	DIODE	1	
C1009, 10	ECA1HXLV220	E. CAPACITOR 50V 22U	2		D1036	FML-G12SP	DIODE	1	
C1011	ECA1HXLV010	E. CAPACITOR 50V 1U	1		D1037, 38	MA3075-M	DIODE	2	
C1012	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1		D1039	MA3240-H	DIODE	1	
C1013	ECA1HXLV010	E. CAPACITOR 50V 1U	1		D1040	MA3160-L	DIODE	1	
C1015	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1		D1041, 42	MA3130-L	DIODE	2	
C1016	ECU1H471GB	P. CAPACITOR 50V 470P	1		D1043	MA3160-L	DIODE	1	
C1017	ECUX1C104KBN	C. CAPACITOR CH 16V 0.1U	1		D1044, 45	U05NU44	DIODE	2	
C1018	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1		D1046	EG01C	DIODE	1	
C1019	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1		D1047	U1GU44	DIODE	1	
C1020	ECUX1C104KBN	C. CAPACITOR CH 16V 0.1U	1		D1048	MA3240-H	DIODE	1	
C1021	ECU1H471GB	P. CAPACITOR 50V 470P	1		D1049	EG01C	DIODE	1	
C1022	ECUM1H562KBN	C. CAPACITOR CH 50V 5600P	1		D1050	U1GU44	DIODE	1	
C1023	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1		D1051	MA3240-H	DIODE	1	
C1024	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		D1052	MA151K	DIODE	1	
C1026	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	1						
C1027, 28	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2		IC1001, 02	FA5311BP	IC	2	
C1040, 41	EEUFA1A332LE	E. CAPACITOR 10V 3300U	2		IC1011, 12	UPC1093J	IC	2	
C1042	EEUFA1V471E	E. CAPACITOR 35V 470U	1		IC1013	UPC393C	IC	1	
C1043	EEUFA1E332E	E. CAPACITOR 25V 3300U	1		IC1014	P030RV31	IC	1	
C1044, 45	EEUFA1C222LE	E. CAPACITOR 16V 2200P	2						
C1046	EEUFA1E681E	E. CAPACITOR 25V 680P	1		L1012	VL00479	COIL	1	
C1047, 48	ECA1CXL101	E. CAPACITOR 16V 100U	2		L1013	VL00605	COIL	1	
C1049	ECA1VHG471	E. CAPACITOR 35V 100U	1		L1014	VL00655K220	COIL	1	
C1050	ECA1EXLV101	E. CAPACITOR 25V 100U	1		L1015, 16	VL00605	COIL	2	
C1051-53	ECA1CXL101	E. CAPACITOR 16V 100U	3		L1017	VL00354	COIL	1	
C1054	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1		L1018	VL00655K220	COIL	1	
C1055	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		L1019	VLP0074	COIL	1	
C1056	ECUM1E104KBM	C. CAPACITOR CH 25V 0.1U	1		L1021, 22	VLP0074	COIL	2	
C1059	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1						
C1060	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1		P1011	VJP2824B003	CONNECTOR (MALE)	1	
C1062	VCK0106K151	C. CAPACITOR 150P	1		P1012	VJP2824B009	CONNECTOR (MALE)	1	
C1063	ECA1VXLV470	E. CAPACITOR 35V 47U	1		P1013	VJP2824B008	CONNECTOR (MALE)	1	
C1065	VCK0106K151	C. CAPACITOR 150P	1		P1014	VJP1243T	CONNECTOR (MALE) 3P	1	
C1066	ECA1VXLV470	E. CAPACITOR 35V 47U	1		P1015	VJP4033	CONNECTOR (MALE)	1	
C1067, 68	ECOE6473KF	P. CAPACITOR 630V 0.047U	2						
C1069-75	ECKD2H101KB	C. CAPACITOR 500V 100P	7		Q1002, 03	2SD1478-R	TRANSISTOR	2	
C1076-78	EEUFA1A822E	E. CAPACITOR 10V 8200P	3		Q1004	2SB710-R	TRANSISTOR	1	
C1079	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1		Q1005	UN2213	TRANSISTOR-RESISTOR	1	
C1080, 81	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	2		Q1006, 07	2SB709-R	TRANSISTOR	2	
C1083	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		Q1011, 12	2SK2258-01	TRANSISTOR	2	
C1085	EEUFA1C222LE	E. CAPACITOR 16V 2200P	1		Q1013-15	PS2561L1V1WL	TRANSISTOR	3	
C1086	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1		Q1017	UN2214	TRANSISTOR-RESISTOR	1	
C1087	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		Q1018	UN2211	TRANSISTOR-RESISTOR	1	
C1088	EEUFA1A822E	E. CAPACITOR 10V 8200P	1		Q1019	UN2111	TRANSISTOR-RESISTOR	1	
C1089	ECA1HXS100	E. CAPACITOR 50V 10U	1		Q1020	PS2561L1V1WL	TRANSISTOR	1	
C1090-93	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	4		Q1022	UN2113	TRANSISTOR-RESISTOR	1	
C1094	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1		Q1023	UN2213	TRANSISTOR-RESISTOR	1	
C1095	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	1		Q1024	UN2214	TRANSISTOR-RESISTOR	1	
C1096	ECA1CXL101	E. CAPACITOR 16V 100U	1						
C1097, 98	ECUM1E474ZFM	C. CAPACITOR CH 25V 0.47U	2		R1001-05	ERJ6GEYG121	M. RESISTOR CH 1/10W 120	5	
C1099	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		R1006	ERG2SJ681	M. RESISTOR 2W 680	1	
					R1007, 08	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	2	
D1001	MA151WK	DIODE	1		R1009	ERJ14YJ4R7	M. RESISTOR CH 1/4W 4.7	1	
D1004	MA151K	DIODE	1		R1010	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
D1005	MA151WK	DIODE	1		R1011	ERJ6RBD241	M. RESISTOR CH 1/10W 240	1	
D1007	MA3082-H	DIODE	1		R1012, 13	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
D1008	MA3051-M	DIODE	1		R1014	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
D1009	MA153	DIODE	1		R1016	ERJ14YJ4R7	M. RESISTOR CH 1/4W 4.7	1	
D1010	U1GU44	DIODE	1		R1017	ERJ6RBD241	M. RESISTOR CH 1/10W 240	1	
D1011	MA151K	DIODE	1		R1018, 19	ERJ6GEYJ225	M. RESISTOR CH 1/10W 2.2M	2	
D1012	MA3240-H	DIODE	1		R1020	ERJ14YJ100	M. RESISTOR CH 1/4W 10	1	
D1013, 14	U1GU44	DIODE	2		R1021	ERG3SJ333	M. RESISTOR 3W 33K	1	
D1015	MA3240-H	DIODE	1		R1023, 24	ERJ12YJ154	M. RESISTOR CH 1/2W 150K	2	
D1016	FMB-G14L	DIODE	1		R1026	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
D1017	U1GU44	DIODE	1		R1027	ERJ6GEYG563	M. RESISTOR CH 1/10W 56K	1	
D1018, 19	MA3051-M	DIODE	2		R1028	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
D1020-22	MA151K	DIODE	3		R1029	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
D1023, 24	MA3051-M	DIODE	2		R1030	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
D1030	D30SC4M	DIODE	1		R1031	ERJ14YJ100	M. RESISTOR CH 1/4W 10	1	
D1031	FML-G12SP	DIODE	1		R1033, 34	ERJ12YJ154	M. RESISTOR CH 1/2W 150K	2	
D1032	RL4ZP	DIODE	1		R1036	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
D1033, 34	FML-G12SP	DIODE	2		R1037	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
					R1038	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
					R1039	ERJ6RBD681	M. RESISTOR CH 1/10W 680	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1040, 41	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R1042	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R1043	ERJ6RBD621	M.RESISTOR CH 1/10W 620	1	
R1044	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R1046, 47	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	2	
R1048, 49	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R1050	ERG2SJ470	M.RESISTOR 2W 47	1	
R1051, 52	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	2	
R1053	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
R1054	ERG2SJ470	M.RESISTOR 2W 47	1	
R1055	VRT0142	THERMISTOR	1	
R1056	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R1057	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1058	ERJ6RBD362	M.RESISTOR CH 1/10W 3.6K	1	
R1059	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R1060	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1061	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1062	VRT0033	THERMISTOR	1	
R1063	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R1064, 65	ERG2SJ681	M.RESISTOR 2W 680	2	
R1066	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R1067	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R1068	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1069	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R1070	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R1071	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1072	ERG3SJ333	M.RESISTOR 3W 33K	1	
R1073	ERG2SJ180	M.RESISTOR 2W 18	1	
R1074	ERJ14YJ390	M.RESISTOR 1/4W 39	1	
R1075	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1076	ERN1PKR33	M.RESISTOR 1W 0.33	1	
R1077	ERG3SJ333	M.RESISTOR 3W 33K	1	
R1078	ERG2SJ180	M.RESISTOR 2W 18	1	
R1079	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R1080	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1081	ERN1PKR33	M.RESISTOR 1W 0.33	1	
R1082, 83	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1084	ERJ6RBD132	M.RESISTOR CH 1/10W 1.3K	1	
R1085, 86	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1087	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1088	VRE0206	M.RESISTOR	1	
R1089	ERJ14YJ154	M.RESISTOR CH 1/4W 150K	1	
R1090	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R1091, 92	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1093, 94	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R1095	ERX2SZJR10	M.RESISTOR 2W 0.1	1	
R1097	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R1098	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1099	ERG3SJ333	M.RESISTOR 3W 33K	1	
△ T1001	VLT0899	TRANSFORMER	1	
△ T1002	VLT0900	TRANSFORMER	1	
VR1001, 02	VRV0112B501	V.RESISTOR 500	2	
		MISCELLANEOUS		
	VLP0394	FERRITE BEAD	8	
	VLP0337	AMORPHOUS BEAD	2	
	VLP0394	FERRITE BEAD	3	
	VSC4779	HEAT SINK (E)	1	
	VSC4778	HEAT SINK (F)	1	
	XYN3+F8	SCREW	14	
	XYN3+F6	SCREW	2	
	VJR1008	EARTH LUG	2	
	XYN3+F10	SCREW	2	
	XYE3+EF8	SCREW	4	
	VSC4707	HEAT SINK	1	
	VNZ2779	INSULATION	1	
	VEEOC18	GND CABLE	1	
	VSC4780	HEAT SINK (D)	1	
	VNZ2919	SHEET	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E19	VEP80A58A	POWER CONNECTION P.C.BOARD	1 (RTL)	
		MISCELLANEOUS		
	VJS4033	CONNECTOR	2	
■ E20	VEP82216B	MECA I/F P.C.BOARD	1 (RTL)	
C1	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C2-C5	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C6	ECEV1CV2200	E.CAPACITOR CH 16V 22U	1	
C7	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1	
C9, 10	ECUX1E104ZV	C.CAPACITOR CH 25V 0.1U	2	
C11	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C12	ECUX1E104ZV	C.CAPACITOR CH 25V 0.1U	1	
C13, 14	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2	
C15	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C20	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C21	ECUX1E104ZV	C.CAPACITOR CH 25V 0.1U	1	
C22	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C23	ECUX1E104ZV	C.CAPACITOR CH 25V 0.1U	1	
C100	ECUX1E104ZV	C.CAPACITOR CH 25V 0.1U	1	
C101	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1	
C102	ECA1HEN101	E.CAPACITOR 50V 100U	1	
C103	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C104	ECEV1CV1000	E.CAPACITOR CH 16V 10U	1	
C200-02	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	3	
D1	MA157	DIODE	1	
D100-02	MA738	DIODE	3	
IC1, C2	0P177GS	IC	2	
IC3	NJM4580ED	IC	1	
IC4-C6	UPC4558G2	IC	3	
IC10	NJM78L09UA	IC	1	
IC11	NJM79L09UA	IC	1	
IC100	MC14538BF	IC	1	
L1, L2	VLF1016A470	FILTER	2	
L100	VLP0133	COIL	1	
P1	VJP2891A030	CONNECTOR (MALE)	1	
P2	VJP3418A080	CONNECTOR (MALE)	1	
P11	VJP3172D002	CONNECTOR (MALE)	1	
P12	VJP3172D005	CONNECTOR (MALE)	1	
P13	VJP3172D002	CONNECTOR (MALE)	1	
P14	VJP3172D003	CONNECTOR (MALE)	1	
P15	VJP3518B002	CONNECTOR (MALE)	1	
P16	VJP3518B003	CONNECTOR (MALE)	1	
P17	VJS3801B010	CONNECTOR (FEMALE)	1	
P18	VJP3518B002	CONNECTOR (MALE)	1	
P19	VJP3172D002	CONNECTOR (MALE)	1	
P20	VJP3518B003	CONNECTOR (MALE)	1	
P21	VJP3518B002	CONNECTOR (MALE)	1	
P22	VJP3172D004	CONNECTOR (MALE)	1	
P24	VJP3518B002	CONNECTOR (MALE)	1	
P25	VJP1230T	CONNECTOR (MALE) 3P	1	
P26	VJP1236T	CONNECTOR (MALE) 9P	1	
P30	VJP3172D003	CONNECTOR (MALE)	1	
P32	VJP3172D004	CONNECTOR (MALE)	1	
P33	VJS3406B015	CONNECTOR (FEMALE)	1	
P34, 35	VJS2889A017	CONNECTOR (FEMALE)	2	
P36	VJS3406B019	CONNECTOR (FEMALE)	1	
P41	VJP3172D002	CONNECTOR (MALE)	1	
P48	VJP3125B002	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
01	2SB1218A-R	TRANSISTOR	1	
Q100, 01	2SB766-R	TRANSISTOR	2	
QR100, 01	UN2214	TRANSISTOR-RESISTOR	2	
R1	ERJ3GEYJ821	M. RESISTOR CH 1/16W 820	1	
R2, R3	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	2	
R4	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R5	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R6	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R7	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R8	ERJ3RBD333	M. RESISTOR CH 1/16W 33K	1	
R9	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R10	ERJ3RBD562	M. RESISTOR CH 1/16W 5.6K	1	
R11	ERJ3RBD473	M. RESISTOR CH 1/16W 47K	1	
R12, 13	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	2	
R14	ERJ6RBD104	M. RESISTOR CH 1/10W 100K	1	
R15	ERJ6RBD823	M. RESISTOR CH 1/10W 82K	1	
R16	ERJ6RBD273	M. RESISTOR CH 1/10W 27K	1	
R17	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R18	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R19	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R20	ERJ3GEYJ102	M. RESISTOR CH 1/16W 1K	1	
R21	ERJ6RBD183	M. RESISTOR CH 1/10W 18K	1	
R22	ERJ6RBD473	M. RESISTOR CH 1/10W 47K	1	
R23	ERJ6RBD682	M. RESISTOR CH 1/10W 6.8K	1	
R24	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R25	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R36, 37	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	2	
R100	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R101	ERJ8GCVJ102	M. RESISTOR CH 1/8W 1K	1	
R102	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1	
R103	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R104	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R105	ERJ8GCVJ102	M. RESISTOR CH 1/8W 1K	1	
R200	ERJ6GEYJ752	M. RESISTOR CH 1/10W 7.5K	1	
R201	ERJ6GEYJ242	M. RESISTOR CH 1/10W 2.4K	1	
R202	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
R203	ERJ6GEYJ752	M. RESISTOR CH 1/10W 7.5K	1	
R204	ERJ6GEYJ242	M. RESISTOR CH 1/10W 2.4K	1	
R205	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1	
SW200	VSS023706	SWITCH	1	
VR1	EVMEGSA00B24	V. RESISTOR 20K	1	
VR2	EVMEGSA00B54	V. RESISTOR 50K	1	
■ E21	VEP80856A	CARRIGE P. C. BOARD	1 (RTL)	
P1	VJP1249T	CONNECTOR (MALE) 9P	1	
P2	VJS2889A012	CONNECTOR (FEMALE)	1	
P3	VJS2889A016	CONNECTOR (FEMALE)	1	
R1-R7	ERDS2TJ221	C. RESISTOR 1/4W 220	7	
■ E22	VEP84303D	AUD10 JACK P. C. BOARD	1 (RTL)	
C6-12	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	7	
J7-14	VJP3417	CONNECTOR (MALE)	8	
P1	VJP3375A060	CONNECTOR (MALE)	1	
R26	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R28	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R32	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R34	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R36	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R38	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R40	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R42	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R44	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R46	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R48	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R50	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R52	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R54	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
R56	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
		MISCELLANEOUS		
	VMP4867	XLR GUIDE ANGLE (A)	1	
	XYN26+F8	SCREW	2	
■ E23	VEP84304B	AES/EBU P. C. BOARD	1 (RTL)	
J3, J4	VJP3417	CONNECTOR (MALE)	2	
P31	VJP3440B012	CONNECTOR (MALE)	1	
■ E24	VEP83385B	422DA SUB P. C. BOARD	1 (RTL)	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3126, 27	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		Q3008	MSD601-R	TRANSISTOR	1	
C3129, 30	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		Q3009, 10	MSB709-R	TRANSISTOR	2	
C3131	ECUX1H121JCV	C. CAPACITOR CH 50V 120P	1		Q3011, 12	MSD601-R	TRANSISTOR	2	
C3135	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		Q3015, 16	MSB709-R	TRANSISTOR	2	
C3136	ECEV1CV4700	E. CAPACITOR CH 16V 47U	1		Q3018, 19	MSB709-R	TRANSISTOR	2	
C3137	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		Q3022	2SC2404-D	TRANSISTOR	1	
C3138	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		Q3024-26	2SC3757-R	TRANSISTOR	3	
C3139, 40	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		Q3027	MSD601-R	TRANSISTOR	1	
C3141	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		Q3029	MSD601-R	TRANSISTOR	1	
C3142	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		Q3034	MSD601-R	TRANSISTOR	1	
C3143, 44	ECEV1EV3300	E. CAPACITOR CH 25V 33U	2		Q3038	2SA1532	TRANSISTOR	1	
C3145, 46	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2						
C3147, 48	ECEV1CV1000	E. CAPACITOR CH 16V 10U	2		R3001, 02	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
C3149-54	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	6		R3009	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
C3155	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		R3012, 13	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
C3156, 57	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		R3014-16	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	3	
C3159, 60	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		R3023, 24	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	2	
C3161	ECEV1EV3300	E. CAPACITOR CH 25V 33U	1		R3025	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
C3162	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		R3026, 27	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
C3163	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		R3028	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
C3164	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		R3029, 30	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
C3165	ECEV1CV1000	E. CAPACITOR CH 16V 10U	1		R3031	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
C3167	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		R3033	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
C3168, 69	ECEV1CV1000	E. CAPACITOR CH 16V 10U	2		R3034	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
C3170	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	1		R3036	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
C3172, 73	ECUX1E104ZV	C. CAPACITOR CH 25V 0.1U	2		R3038, 39	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
C3203	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1		R3040	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
C3207	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1		R3041, 42	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
					R3043	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
D3001	MA152K	DIODE	1		R3044	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
D3003, 04	MA152K	DIODE	2		R3045	ERJ3GEYJ511	M. RESISTOR CH 1/16W 510	1	
					R3049	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
FL3001	VLF1423	FILTER	1		R3050	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
FL3002, 03	VLF1424	FILTER	2		R3051	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
					R3053	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
IC3001	SN74ALS244C	IC	1		R3054	ERJ3GEYJ241	M. RESISTOR CH 1/16W 240	1	
IC3002, 03	T74VHC244F	IC	2		R3055	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
IC3004	PZ5128S10BP	IC	1	BLANK ROM	R3056	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
ID3004	VVVS12902		1	SOFTWARE	R3058, 59	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
IC3005	74AC04SJ	IC	1		R3060	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
IC3006-08	T2242AR2C1	IC	3		R3061, 62	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	2	
IC3009	PZ5128S10BP	IC	1	BLANK ROM	R3063	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
ID3009	VVVS12902		1	SOFTWARE	R3064	ERJ3RBD181	M. RESISTOR CH 1/16W 180	1	
IC3010-12	UPD48506G25	IC	3		R3068	ERJ3GEYJ681	M. RESISTOR CH 1/16W 680	1	
IC3013	ADV7122KST50	IC	1		R3069	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
IC3014	AD589JR	IC	1		R3070	ERJ3GEYOR00	M. RESISTOR CH 1/16W 0	1	
IC3015	NJM084M	IC	1		R3072	ERJ3GEYJ750	M. RESISTOR CH 1/16W 75	1	
IC3016-18	LT1228CS8	IC	3		R3073	ERJ3GEYJ241	M. RESISTOR CH 1/16W 240	1	
IC3030	MC74HC32AF	IC	1		R3074	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
IC3031	TC7S04F	IC	1		R3075	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
IC3033	AN78N10	IC	1		R3077	ERJ6GEYOR00	M. RESISTOR CH 1/10W 0	1	
IC3034	AN78N09	IC	1		R3084, 85	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	2	
IC3036	AN79N09	IC	1		R3086-91	ERJ3RBD472	M. RESISTOR CH 1/16W 4.7K	6	
IC3038	NJM78L05UA	IC	1		R3092-94	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	3	
IC3039	NJM79L05UA	IC	1		R3166	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
IC3040	AN78N05	IC	1		R3168-70	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
IC3042	AN79N10	IC	1		R3171	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
IC3054	PZ5128S10BP	IC	1	BLANK ROM	R3173	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
ID3054	VVVS12902		1	SOFTWARE	R3175	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
					R3176	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
L3001	VLP0133	COIL	1		R3177	ERJ6RBD221	M. RESISTOR CH 1/10W 220	1	
L3002	VLP0163J220	COIL	22UH	1	R3185	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
L3003, 04	VLP00576	COIL		2	R3188	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
L3005	VLP0163J220	COIL	22UH	1	R3189	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
L3013	VLP0163J470	COIL	47UH	1	R3191	ERJ6RBD181	M. RESISTOR CH 1/10W 180	1	
L3015-18	VLP0133	COIL		4	R3197	ERJ6RED510	M. RESISTOR CH 1/10W 51	1	
					R3198	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
P3001	VJS3538A080	CONNECTOR (FEMALE)	1		R3199	ERJ6RED560	M. RESISTOR CH 1/10W 56	1	
P3002	VJS3538A052	CONNECTOR (FEMALE)	1		R3200	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	1	
P3003	VJP3125B007	CONNECTOR (MALE)	1		R3201	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
					R3202	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
Q3002	MSD601-R	TRANSISTOR	1		R3208	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
Q3004	MSB709-R	TRANSISTOR	1		R3209	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
Q3005	MSD601-R	TRANSISTOR	1		R3212	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
Q3006, 07	MSB709-R	TRANSISTOR	2		R3215	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS		
	VG02507	LED SPACER	3	
	VMX2147	SPACER	7	
■ E26	VEP80852A	UP FRONT 2 P.C. BOARD	1 (RTL)	
D1	VLL0029	LED	1	
P1	VJP1246T	CONNECTOR (MALE) 6P	1	
SW1	VSP0864C001	SWITCH	1	
■ E27	VEP86285B	FRONT CPU P.C. BOARD	1 (RTL)	
C1	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2	ECEV1HV2R20	E.CAPACITOR CH 50V 2.2U	1	
C3	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4, C5	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C6	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7-14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
C15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C16, 17	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C20, 21	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2	
C22-25	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C26, 27	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2	
C28-37	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	10	
C38, 39	ECEV1CV4700	E.CAPACITOR CH 16V 47U	2	
C40-42	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C43-47	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C48-51	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C52-75	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	24	
C76-81	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	6	
C82	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C84-86	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	3	
C88, 89	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C93	ECEV1CV4700	E.CAPACITOR CH 16V 47U	1	
D1-D8	MA152MK	DIODE	8	
DP1	VE01847	DISPLAY TUBE	1	
FL1-L4	VLF1016A470	FILTER	4	
IC1	HD64180ZRP10	IC	1	
IC2	VS12975A	IC	1	
IC3	K6256DLG7L	IC	1	
IC4	TL7705CPSB	IC	1	
IC5	74F32SJ	IC	1	
IC6	MC74HC161AF	IC	1	
IC13	MC74HC04AF	IC	1	
IC14	TE7751	IC	1	
IC15	MC74HC138AF	IC	1	
IC16	MC74HC32AF	IC	1	
IC17	SN75C1168NS	IC	1	
IC18	MC74HC4538AF	IC	1	
IC20, 21	NJW78L05UA	IC	2	
IC22	MC14015BF	IC	1	
IC23	UPC339G2	IC	1	
IC24	MC74HC04AF	IC	1	
IC25	MC74HC11F	IC	1	
IC26	MC14013BF	IC	1	
IC27	UP071055GB	IC	1	
IC28, 29	MC14516BF	IC	2	
IC30	TL05491PS	IC	1	
IC31	MC74HC4051F	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC32	TLC5491PS	IC	1	
IC33	MC74HC4051F	IC	1	
IC34-41	NJM2904M	IC	8	
IC42	MC74HC11F	IC	1	
IC43	MC74HC32AF	IC	1	
IS2	VJS2336A032	IC SOCKET	1	
L1-L3	VLP0133	COIL	3	
P1, P2	VJP1942T	CONNECTOR (MALE)	2	
P3, P4	VJP3440A016	CONNECTOR (MALE)	2	
P5	VJP2891A016	CONNECTOR (MALE)	1	
P6	VJS3281A020	CONNECTOR (FEMALE)	1	
P7	VJS2698A028	CONNECTOR (FEMALE)	1	
P8	VJP1233T	CONNECTOR (MALE) 6P	1	
R1	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R2-R7	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6	
R8-15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R16	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R17	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R18, 19	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R20	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R21-36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	16	
R37-41	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R42, 43	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R44	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R46	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R48	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R49, 50	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R51-54	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	4	
R55-58	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R59-63	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	5	
R64	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R65-69	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	5	
R70-98	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	29	
R99, 00	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R101-04	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	4	
R105-07	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	3	
R128, 29	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
R131-56	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	26	
R157	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R158-65	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R200, 01	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R202, 03	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
SW1	VSS0184	SWITCH	1	
X1	VXS0641	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VMX2507	SPACER	2	
	XYN3+K8	SCREW	2	
■ E28	VEP86148D	FRONT CPU SUB P.C. BOARD	1 (RTL)	
P1	VJS3406B028	CONNECTOR (FEMALE)	1	
R1-R5	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	5	
SW1-W6	VSS0391	SWITCH	6	
SW10	VSS0391	SWITCH	1	
SW11-13	VSP1013	SWITCH	3	
VR2-R5	VRV0273	V.RESISTOR	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E29	VEP80A49C	FRONT SW P.C.BOARD	1	(RTL)	SW3	VSP0792	SWITCH	1	
					SW5	VSP0790	SWITCH	1	
					SW7	VSP0795	SWITCH	1	
					SW8	VSP0864A000	SWITCH	1	
C1	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1		SW11,12	VSP0795	SWITCH	2	
C4,C5	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2		SW15	VSP0999A001	SWITCH	1	
C7-11	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5		SW17-24	VSP0853A000	SWITCH	8	
C13	ECEA0JGE102	E.CAPACITOR 6.3V 1000U	1		SW27,28	VSS0226	SWITCH	2	
C14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		SW31	VSS0226	SWITCH	1	
C16	ECEV1HV4R70	E.CAPACITOR CH 50V 4.7U	1		SW32	VSP1005	SWITCH	1	
C17	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1		SW34	VSP1005	SWITCH	1	
C18	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		SW39-41	VSP1005	SWITCH	3	
C19	ECEA1AGE331	E.CAPACITOR 10V 330U	1						
C20	ECEA1HGE470	E.CAPACITOR 50V 47U	1		TR1	VLT0869	TRANSFORMER	1	
C30,31	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2				MISCELLANEOUS		
D2-D5	LN38GCPP	LED	4						
D6	LN28RCPP	LED	1			VJF1258	HOLDER	1	
D7	LN38GCPP	LED	1			VMX2147	SPACER	13	
D9	LN38GCPP	LED	1						
D10	LN48YCPP	LED	1						
D12	LN48YCPP	LED	1						
D13-16	LN38GCPP	LED	4						
D17-25	MA152WA	DIODE	9		■ E30	VEP80A99A	FRONT VR 1 P.C.BOARD	1	(RTL)
D26,27	MA152A	DIODE	2						
D28-38	MA152WA	DIODE	11		P1	VJP1230T	CONNECTOR (MALE) 3P	1	
D39	MA152A	DIODE	1		R6	ERDS2TJ220	C.RESISTOR 1/4W 22	1	
D40	MA152WA	DIODE	1		VR6	EMVBB6018B14	V.RESISTOR 10K	1	
D44	MA4300	DIODE	1				MISCELLANEOUS		
D45	MA166	DIODE	1						
D46	MA701A	DIODE	1			VMP5945	BARRIER ANGLE	1	
D47	MA4030M	DIODE	1			XTV3+6F	SCREW	1	
						VEE0F84	FRONT VR1 CABLE	1	
DP1	VSL0462	DISPLAY TUBE	1						
F1	EYP2BN135	FUSE	1		■ E31	VEP80B00A	FRONT VR 2 P.C.BOARD	1	(RTL)
IC1	UPD71055GB	IC	1						
IC2,C3	MC74HC138AF	IC	2		FL1-L3	VLF1356	FILTER	3	
IC5-C9	MC74HC273AF	IC	5		J1	VJJ0378	M6 JACK	1	
IC11	UPD16310GF	IC	1		P1	VJP3440A016	CONNECTOR (MALE)	1	
P1,P2	VJP1986T	CONNECTOR (MALE)	2		R1-R5	ERDS2TJ101	C.RESISTOR 1/4W 100	5	
Q45,46	2SC1815Y	TRANSISTOR	2		VR1-R5	EVU023006B14	V.RESISTOR 10K	5	
Q47	2SC3074Y	TRANSISTOR	1				MISCELLANEOUS		
Q48-53	2SB709A-R	TRANSISTOR	6						
QR1-40	UN2214	TRANSISTOR-RESISTOR	40						
R4-11	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	8			VJF1258	HOLDER	1	
R12-14	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	3			VMX2147	SPACER	13	
R15-19	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	5						
R20-26	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	7						
R27-29	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	3						
R30-34	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	5						
R35-42	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	8						
R43-50	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	8						
R51-53	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	3						
R110	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1						
R111	ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1						
R112	ERDS2TJ101	C.RESISTOR 1/4W 100	1						
R113	ERDS2TJ221	C.RESISTOR 1/4W 220	1						
R114	ERDS2TJ220	C.RESISTOR 1/4W 22	1						
R115	ERJ8GCYJ103	M.RESISTOR CH 1/8W 10K	1						
R120	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1						
R121-28	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8						
R129-40	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	12						
R141	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1						
R142	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1						
R143-45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3						
SW1	VSP0791	SWITCH	1						
SW2	VSP0788	SWITCH	1						